

Antiquity

A QUARTERLY REVIEW OF ARCHÆOLOGY



Edited by O. G. S. Crawford, F.S.A.

DECEMBER 1930

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Antiquity

A Quarterly Review of Archaeology

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DECEMBER 1930

Editorial Notes

THE exhibitions and excavations of last summer revealed very clearly the methods and aims of modern excavators. Both Ur of the Chaldees and Verulamium are big sites in every sense, and they are being excavated on a big scale. The art of excavation has now, in fact, reached maturity ; the director knows what he wants and he knows how to get it. He starts with a programme to carry out, and he thinks in terms of years, or seasons. He is no longer a mere grubber up of ruins or of clay tablets or museum specimens, though these naturally have their place in any well-ordered scheme. He is out to solve certain problems by methods whose efficacy has been proved by experience.



Ur and Verulamium provide peculiarly good examples of intelligent direction of excavation on a large scale, where the site has already been chosen, or (as at Verulamium) imposed by circumstances outside archaeological control. There is scope, however, for the same discrimination; first, in the selection of sites or regions, and then more broadly still in the preliminary choice between excavation and some other branch of research. First, if it has already been decided to excavate somewhere, and it remains only to select a region, how shall the Committee or Directors come to a decision? They may either follow precedent or they may strike out a new line. They may vote

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for some already well-excavated country or group of sites ; or they may take stock of the World and select one of its darker corners. There are many such available. Central Europe contains stratified mound-sites that still await an excavator of the first rank. South-western Anatolia (the ancient provinces of Caria, Lycia, and Pamphylia) is a virgin field, whose possible Cretan connexions are still mainly conjectural. There are similar openings in Nigeria, Baluchistan, and Turkestan, to say nothing of China.



But excavation is costly and trained excavators are none too common. Suppose that for motives of economy or otherwise, it is decided not to excavate. What are the alternatives ? There is always the possibility of an air-survey of the ancient sites of a region. This has never been attempted, outside England, for purely archaeological purposes. It is sure to be moderately costly at the start, but will probably not prove more so than excavation on a large scale, and most of the expenses will be non-recurring. It has the great advantage of providing an immediate return for the outlay, in the form of photographs. Then there is ground-survey—the exploration of a little-known region for the purpose of discovering ancient sites and placing them upon the map; of following ancient roads; of copying inscriptions; of noting the character of surface-finds on a *tell* and drawing therefrom (if possible) conclusions with regard to its age ; and so forth. The French are doing much exploration of this kind in northeastern Syria.



The present time is peculiarly suitable for carrying out one or both of these undertakings. To take a concrete example :—An international committee is organizing the compilation of a map of the Roman Empire. The results are being published on the International Map of the World on a scale of 1:1,000,000 (16 miles to 1 inch). The first sheet (part of Great Britain) has just been published, and others will appear shortly. This country is responsible for sheets covering British mandated territory, which includes of course Palestine and Transjordan. To compile a map of this area as it was at the beginning of the Christian era is a big task, and to do it properly will cost money. It can only be done by someone on the spot and he must do a lot of field-work. Even though no more than a skeleton map is contemplated by the Commission, it will be necessary to identify on the spot the

EDITORIAL NOTES

exact sites of the stations recorded in the Antonine Itinerary and on the Peutinger Table. The problems to be solved are relatively easy but the work will take time if it is to be done properly. Ways and means need not be discussed here, but one would imagine that the best method might be the creation of some kind of *ad hoc* research studentship.



Here is a chance for the coordination of research ! Here we have on the one hand a comprehensive and practical working scheme, and on the other an obvious means of assisting it. Everyone will agree that a map of Palestine as it was in the time of Christ would be an invaluable possession. It can be produced within a very few years at a fraction of the cost of a single season's excavation. If the help of the aeroplane can be secured as well, so much the better : it is almost essential to the success of the scheme.



To sum up, we may say that while there is room for properly conducted excavations in certain regions, there are other ways of advancing knowledge which offer a bountiful return for a very moderate outlay.



After all, nearly everyone likes studying a map or looking at pictures. No one has ever said there are too many maps, though it is often said (and we agree) that there are far too many books—not only novels but books and pamphlets which are learned in the worst sense and quite unreadable. A map synthetizes a host of facts and takes up very little room. We want less excavation and less scribbling but more maps and more air-photographs !



Orientation is a thorny subject. In ANTIQUITY we have published articles on both sides. We have our own opinion on the matter, but mere opinions are of little value. It is not a subject that we have ever studied very deeply, and it is getting rather threadbare nowadays. We much regret that in the article by George Engleheart, F.S.A., on Orientation, published in our last number, there occurred expressions to which Mrs Cunningham takes exception, namely, that the Woodhenge excavators 'surely *desired* to collate Woodhenge with Stonehenge in

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respect of orientation'; and that the 'adaptation of data to theory appears in the hypothetical orientation of Woodhenge'. Mr Engleheart assures us that by these expressions he did not in any way imply that the excavators were determined to press or distort facts to fit a preconception, but that he meant no more than this—that the excavators, struck by a general similarity in plan of the two monuments, were glad to think they discovered facts which, in their sincere belief, enabled them to find the several features of Stonehenge, including that of orientation, which they accept, matched in those of Woodhenge.



We have also received a letter from Vice-Admiral Boyle-Somerville which we regret we have not room to print in full. The writer refers to his own papers on Orientation, published in *ARCHAEOLOGIA* (vol. 73) and in *ANTIQUITY* (vol. I, March 1927). He claims that the facts are there for anyone to see, and suggests that field-observation with instruments is a test of orientation and recommends it to sceptics. We wish to be perfectly fair to both sides, but we think that our readers will now have heard enough about orientation, to say nothing of Stonehenge; and we therefore promise them a truce for, say, five years.

VOLUME V

With the present number the fourth volume of *ANTIQUITY* is completed and expressions of appreciation continue to reach us. At the same time the number of original subscribers inevitably becomes gradually smaller—through the operation of natural causes—not, we are glad to know, through dissatisfaction. We would again point out that our supporters can help us by bringing *ANTIQUITY* to the notice of their friends. Last year quite a number of subscribers adopted the editorial suggestion of making a Christmas present to a friend in the form of a year's subscription, and we are sure that this can be extended to mutual advantage and satisfaction. With this issue we insert a renewal notice for subscriptions for 1931 and as we have said before an early response is a very great convenience. We have endeavoured to omit the form from copies sent to those who make their payments through banks, or who have paid in advance.

Submarine Discoveries in the Mediterranean

by A. MERLIN*

Membre de l'Institut de France, Conservateur au Musée du Louvre

HIDDEN beneath the Mediterranean is a matchless collection of antiquities; but for centuries the sea has jealously watched over its treasures, allowing us no more than an occasional peep. Sometimes when a harbour is being deepened the dredger brings up an important specimen, such for instance as the massive silver patera with designs in gold, a splendid example of Alexandrian art, now in the Bardo Museum at Tunis; or the bronze statuettes from the harbour of Bona (found in July 1912), one of which, representing a girl—unfortunately headless—seated on the ground, is a rare combination of grace and artistic skill. At other times again it is the lucky haul of a fisherman which gives back to us a fine piece of sculpture. Thus it was that in 1832 near Piombino there was fished up out of the sea the Apollo of the early 5th century B.C. which is the pride of the Salle des Bronzes in the Louvre. Other objects found in the same way are the fine bronze headless statue of a boy found near Eleusis in 1879, and acquired by the Berlin Museum from the Sabouroff collection; Poseidon holding a dolphin, of the early 5th century, found near Creusis on the Boeotian shore of the Gulf of Corinth and now restored and exhibited at Athens; and the marble Aphrodite found in 1929 not far from Rhodes. One might easily prolong the list.

These discoveries are of great, and sometimes exceptional, intrinsic interest. They come back to us romantically from a mysterious world. But they serve to stimulate rather than to appease our appetite. One must therefore feel peculiarly grateful to Poseidon when he is in a generous mood, and when systematic explorations are rewarded by one of those cargoes of works of art which in a fit of anger he once sank. During the last few years he has several times been almost prodigal of his favours.

* Translated by the Editor.

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CERIGOTTO

The first instance occurred about Easter 1900, near the little island of Cerigotto (Anticythera), which lies off Cape Malea, the easternmost point of the Peloponnese, in waters of agelong notoriety, strewn with innumerable ship-wrecks. Sponge-fishers at work about 20 to 25 metres from the shore observed a compact blackish mass at a depth of 60 metres ; it was 50 metres long and consisted of statues and other objects scattered about amongst the remains of a ship. From November 1900 to September 1901 the Greek Government carried out explorations which, by reason of the enormous difficulties to be overcome, especially the depth, underwent many vicissitudes. The pressure which the divers had to withstand only allowed them five minutes of useful work. In spite of all this important results were achieved and many objects, now in the National Museum of Athens, were recovered, though the site does not appear to have been exhausted. The finds include marble and bronze statues, valuable utensils, tiles, and amphorae. The principal specimen is a large bronze statue fished up in pieces but now completely restored (1 m. 94 high): it represents a young man with upraised right arm. (Plate I). The identification has given rise to much controversy, nor is the issue decided yet. It has been explained as Hermes making a rhetorical gesture, as Perseus holding up the head of Medusa, as the Paris of the sculptor Euphranor, or as a young victor at the games holding a ball. It is a Hellenistic copy of an original produced by the Argive-Sicyonian school of the early 4th century B.C., whose artists combined a typically Peloponnesian energy of style with a more Attic type of countenance. It foreshadows the Lysippean rhythm of the Apoxyomenos. The other bronzes are less interesting ; the statue of a girl, of the middle 5th century, is headless ; a statuette of Apollo standing (0 m. 54 high) is in the style of Polycleitus ; another (0 m. 43 high), variously regarded either as a Hermes or a Diomedes carrying off the Palladium, is of a beardless man in the act of advancing with care and decision. Particularly noteworthy is a head of an individualized kind, the copy of a fine portrait-statue of the Hellenistic period. It was at first regarded as that of an athlete, but the long beard, and the untidy appearance and contemplative air betray rather the philosopher. Amongst the broken fragments were arms (one a boxer's, with the hand holding a caestus), feet, and a lyre: these evidently belonged to bronze statues, but others came from a couch whose panels were ornamented with the heads of men and animals in relief.

SUBMARINE DISCOVERIES IN THE MEDITERRANEAN

In spite of inevitable mutilations, the bronzes appear to be on the whole fairly well preserved when the calcareous deposit and the shells attached to them have been removed. It is otherwise with the marbles, which have been nibbled and bored by sea creatures till in many instances they have been reduced to shapeless stumps. A few of them, however, may be mentioned ; though fairly numerous they are hard to identify :—a copy of the Aphrodite of Cnidos ; a colossal Heracles, of the type of the Farnese Hercules, and measuring 2 metres 50 in height (7' 6") : on account of its weight it was only with great difficulty removed from the water ; two men forming part of a group, one of whom may be Odysseus ; a young boy with a rather vulgar face, in a stooping posture, the right knee almost touching the ground, who has been alternately identified as a combatant suing for mercy, a ball-player, a shepherd playing with a girl, and a wrestler ; this statue dates from the Hellenistic period (last quarter of the 4th century B.C.) and is a copy from bronze. Lastly there were remains of four horses drawing a chariot.

Amongst the other objects recovered were an iron anchor and, somewhat strangely, some roof-tiles ; also some pieces of wood fastened together by iron nails or wooden pins—the remains of the ship ; pottery vessels—amphorae, dishes, plates—and glass drinking-cups, evidently those in daily use on board.

It is not easy to be sure of the exact port of origin of the cargo. Several of the bronze statues did not come straight from the workshop, for under their feet are fixed the lumps of lead with which they had been attached to pedestals ; the cargo must therefore represent, at any rate in part, some kind of plunder. But the great majority of the marbles are free copies of well-known originals and have plainly been made for export. The Greek archaeologist Svoronos believed that he had practically proved that all these objects of art had been taken from Argos, and had been removed by the order of Constantine to adorn his new capital on the Bosphorus. It was an ingenious theory but it must be discarded, because it is inconsistent with the place and date of the wreck. A vessel sailing from the gulf of Nauplia towards Constantinople has no excuse for being shipwrecked off Cape Malea. Here rather it was a ship going from Greece to the west, such as that spoken of by Lucian, in which Sulla sent to Rome a picture by Zeuxis taken from Athens and which sank in rounding the fatal promontory, or the brig Mentor, which was fitted up to convey the Parthenon sculptures to Lord Elgin but which never passed Cerigo. As for the date, two facts

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now enable us to determine it fairly closely. On the metal dial of a curious astronomical instrument, the ship's planetary with explanatory writings on it, occurs the name of a month which was not inserted in the calendar until the year 30 B.C. ; the wreck must therefore have taken place after that date. On the other hand, amongst the smaller objects of pottery is a fragment of a basin with ornament in relief which was certainly made at Delos, where the manufacture of this class of ware ceased soon after the beginning of the Christian era. Consequently the misfortune which caused the shipwreck at Cerigotto may be placed in the Augustan period. Sailing perhaps from Athens, the course was set for Rome or some other Italian port with a full cargo of statues destined for sale.

MAHDIA

It was to meet the demand of rich Romans for Greek works of art that about eighty years earlier there sailed for Italy another vessel which, after embarking its cargo at the Piraeus, met the same fate off Mahdia on the Tunisian coast, between Susa and Sfax. Here also the discovery was made by sponge-fishers, at the beginning of June 1907. The depth is less, only 39 metres; but it is quite formidable enough, and it is aggravated by the much greater distance from the shore (4800 metres).

The shipwreck was explored by the Direction des Antiquités de la Tunisie in six successive campaigns (1907-11 and in 1913). Contrasted with that of Cerigotto, which consisted mainly of statues, that of Mahdia included a large number of marble columns; about 60 have been counted placed in seven parallel rows, with a total length of 24 metres. There are also other architectural pieces—bases, blocks, cornices, capitals, especially the last. Probing below has revealed a layer of wood about 20 centimetres thick, representing the deck. Then comes the hold where the more valuable objects were preserved—bronze and marble statues, statuettes and reliefs, fragments of bronze furniture and vessels with delicate reliefs, the remains of large ornamental objects of marble, craters and candelabra. The whole collection is in some respects not unlike that of Cerigotto, but is much more varied. The excavations, if one may so call them, have filled several rooms of the Bardo Museum at Tunis.

As at Cerigotto, too, the bronzes are in general very well preserved. The one which is most impressive is of Cupid, victorious after an archery contest. He has just alighted, and his wings are still outspread; his

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right hand by a gesture indicates the newly-won crown ; in his left he holds his bow, now broken. Here we have a good copy of an original of the 4th century B.C., in which various influences, particularly that of Lysippus, converge.

Of less aesthetic value, but sufficiently remarkable for its archaistic style, is a little bronze herm of Dionysus. (Plate II). His beard and locks are curled with extreme care; a long fillet covers his head with fantastic convolutions. By singular good fortune the work is signed with the name of Boethus of Chalcedon, a well-known chaser and sculptor of the first half of the 2nd century B.C.

Two large bronze cornices appear to have ornamented a votive offering, a trophy in the form of the prow of a ship. They are adorned with busts of Dionysus and Ariadne respectively.

There are, besides, eight big statuettes. The three most surprising, two dancers and a clown, are grotesques—dwarfs with disproportionately large heads; they are represented as dancing wildly to the accompaniment of rattles, and are irresistibly comic, especially the girls. They display Greek art in a realistic garb that is not familiar but none the less characteristic.

A graceful Cupid, covered with jewels and charms, the head crowned, dancing and singing to the music of a zither, belongs perhaps to the last trio. Another bronze figurine brings us back to the great traditions of sculpture: a wild-faced Satyr, tall and slender, ready to leap forward—his passionate expressive attitude recalls the works of the Pergamene school. A Hermes of Polycleitan style holds out his right arm in a rhetorical pose.

Other smaller statuettes had been the ornaments of furniture—Satyrs with lank sinewy forms, crouching greyhounds, a comic actor seated on a round pedestal which must have topped a candelabrum. Busts of Niké, Athena, Artemis, and of Maenads were applied in relief on furniture and other objects, together with galloping griffins, heads of Maenads and comic masks. Heads, one of a neighing horse, full of vitality, and several of mules and ducks belonged to bedsteads, like those from Cerigotto. Two lion-heads and two masks of laughing young Satyrs have been re-attached to the sides of a brazier on wheels. The Mahdia ship contained many other objects—vases of every description, tall candelabra, hand lamps—all for the embellishment of the houses of the rich.

Compared with these bronzes the marbles, just as at Cerigotto, have suffered severely from their long sojourn beneath the sea; only

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too often there survives nothing but a corroded and unrecognizable lump of stone. But disfigured though they are, the marbles have a story to tell. When we examine them we find that they were objects of commerce. The workshops where they were made employed methods of mass-production with due consideration for speed of output and economy. The statues are made up of separate pieces, quite small in size and easy to handle and transport; they could be manufactured simultaneously by workmen graded according to their skill. Little care was taken to see whether the raw lump was of adequate size or how the pieces joined together. The top or back of a head was often formed of a piece attached to it separately and secured by a large leaden rivet. The line of junction often passes across a shoulder and even through the middle of the cheek. We also have several heads destined for statues of more than life-size—Niobe, Niobids, Satyrs male and female, and youths. The best preserved, which has a calm and somewhat dreamy expression, is an Aphrodite; the head is attached to part of the bust, but there was no right shoulder!

Enormous craters, broken into countless fragments, four of which however have been mended, give us further valuable information about the methods of the sculptors. Our four bowls, surrounded by bacchic scenes of Satyrs and dancing Maenads, consist of two similar pairs. On one of the pairs we have figures of the same character, and placed in the same order, as on the Borghese vase, found at Rome in the 16th century and now in the Louvre. The other two had exactly the same subject as a vase from the Campo Santo at Pisa. The artists responsible for them copied assiduously to supply a present demand, and sacrificed all originality in their efforts to produce easily what they knew their patrons would welcome.

Several candelabra in the neo-Attic style, of a fine ornamental character, have, on a triangular base supported by the foreparts of griffins, several rows of round plates held one above another by bunches of acanthus or baskets of leaves. (Plate III).

One of the most surprising discoveries was that of Greek inscriptions, which appear, from their context, to have been carved for use at Athens, the majority in temples of the Piraeus. This proves that the wrecked ship sailed from Athens, and embarked its cargo at the Piraeus. What we can only infer for the vessel of Cerigotto, we can state as a fact for that of Mahdia.

As regards the date of the shipwreck, there is abundant evidence that it took place at the beginning of the 1st century B.C.; it is only

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necessary to mention some. Amongst the mass of jars, plates, dishes and querns on board was a humble terracotta lamp whose flaxen wick survived in a carbonized state, showing that it was in actual use. It belongs to a type manufactured at the end of the 2nd century B.C. The anchors—huge masses of lead two of which, weighing between 1300 and 1500 pounds (600–700 kilograms), have been recovered—are of a type in use during the 1st century B.C.

The vessel having been loaded at Athens and lost during the first quarter of the 1st century, it is pertinent to observe that in 86 B.C. Athens was captured by Sulla, and the Piraeus plundered and burnt. We dare not go so far as to state that Sulla himself ordered the consignment, but it is nevertheless probable that the events of the year 86 caused some of the objects to be torn from their natural surroundings and put upon the market. Some shrewd merchant had collected them, added a number of newly-made statues, ornamental pieces, furniture and objets-de-luxe turned out by the workshops. He shipped the whole consignment overseas, most probably to Italy, to meet the growing demand of a clientèle for whose benefit the monuments of Greece were pillaged and her masterpieces reproduced more or less faithfully by the processes of industry. For in the 1st century B.C. Athens still retained her prestige as the home of art. A number of sculptors worked in succession there, copying always the same models and adopting methods which were expeditious though not lacking in skill. They derived their inspiration from the works of a noble past which they justly reflected. The wrecks of Mahdia and Cerigotto prove that the authors of these copies had not, as had previously been imagined, emigrated to Italy, but that they remained in Greece and above all in Athens, whence right down to the last century of the Roman Republic were exported to the peninsula thousands of shiploads, such as ours, of statues, columns, sumptuous furniture and choice trinkets.

MARATHON

These two important discoveries raised the hopes of the statue-fishers, whose expectations of more good fortune were not disappointed. About the middle of June 1925 the crew of a fishing-smack in the bay of Marathon hauled up in its nets an almost perfect bronze statue 4 feet 3 inches (1 metre 30) high, now in the Athens Museum. It represents a boy holding his right hand above his head, and with his left hand held slightly forward. In his left palm was placed some fairly bulky object which has disappeared. The true interpretation remains conjectural,

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though the most varied opinions have been expressed—that it is Hermes looking at the tortoise which he is about to convert into a lyre ; that it is a boy holding a fighting-cock, or balancing something, or carrying a lamp ; or a victorious athlete gloating over the prize he has just won, or a young fruit-picker, or even a dancing satyr! It is a work of art both charming and tasteful, and an original of the second half of the 4th century B.C. From the poise of the head, and from the general attitude and slightness of the model, it may be attributed to the school of Praxiteles ; whilst the face, the treatment of the hair and the knowledge of anatomy seem to suggest some degree of influence from Lysippus. Although regular 'excavations' have not yet been carried out at the place where the statue was hauled up, it is plain that we have here to deal with a shipwreck ; at the same time there were found remains of planks and the foot of a bronze candelabrum. The site is remarkably promising.

ARTEMISION (EUBOEIA)

A little later, in September 1928, Zeus the Thunderer emerged from the sea.

Two years before the National Museum of Athens had acquired a bronze arm obtained from the channel north of Euboea, opposite the ancient site of Histiaea. The discovery aroused the cupidity of dealers, who formed a conspiracy to remove secretly the image whose existence was betrayed by this arm ; they were on the point of succeeding in their bold venture when the Greek Government intervened just in time ! The prize was a fine one. The statue is 6 feet 8 inches (2m. 09) high and almost complete, for the two broken arms fit perfectly to the body ; apart from the filling of the eye-sockets, there is missing only the object which he was brandishing in his right hand, doubtless the thunderbolt which the god, standing firmly with legs astride, is about to hurl with a vigorous and lordly mien upon the target to which his other hand is pointing. (Plate IV). Others hold that it is a Poseidon brandishing his trident. This original, cast for a temple, is most remarkable on account not only of its beauty but also for its date, for it goes back to about 460 B.C. The arrangement of the hair, with its encircling plait, occurs on the Fair-haired Boy of the Acropolis, and on the 'Apollo with the Omphalos'. This archaic feature is to be observed also on the Laborde head from one of the pediments of the Parthenon recently acquired by the Louvre ; here it is associated with an expressive naturalism already close to that of Pheidias and shown

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both in the rendering of the beard and the body. A piquant feature was finding round the waist of Zeus the rope with which he had been fastened to the ship.

In the same spot, 700 metres from the shore and at a depth of 48 metres, there was found in the autumn of 1928 the forepart of a galloping life-size horse with out-stretched neck and short mane. It belongs to the middle of the 5th century B.C. There was also found the figure of a young horseman with curly hair, like that of a negro, and with limbs stretched taut as if he were controlling his mount ; at first sight it seemed too small and too late in date to belong to the galloping horse, but it probably formed part of the same group.

The 'excavations' resumed in May and June 1929 yielded fresh portions of the horse and rider, as well as terracotta amphorae used by the crew, the ship's lamp, pieces of the hull of the ship with bronze and iron nails and leaden casings, a leaden anchor, and heavy boulders which had been used as ballast. If there were actually present amongst the pottery vessels some of Arretine ware, as has been stated, the wreck would date either from the last decades before the Christian era, or from the first part of the 1st century A.D., and we should come back yet once again to the period of the wrecks of Cerigotto and Mahdia.

After so many almost miraculous finds, what have the shores of the Mediterranean in store for us, strewn as they are with bronzes and marbles which have been overwhelmed by the waves ? Chance discoveries followed up by systematic research will be able, more surely than any other method, to recover in all their radiant brightness a few of those ancient masterpieces ' whose great inexpiable loss was mourned by subject Greece '. The rapacity of the Romans, greedy for the artistic treasures of Greece, and the fury of the elements which abstracted some portions of their booty, will have had at least this advantage ;—they have already enabled us and will in the future again enable us, to re-discover in a remarkable state of preservation wonders which, had they been left in their original homes, would long ago have disappeared for ever. The old 'lord of shipwreck', by sheltering them in his bosom for twenty centuries, has saved them from destruction and kept them safe for our enthusiastic appreciation.

TRANSLATOR'S NOTE

M. Merlin's article reminded us of a letter we received some years ago from Professor J. L. Myres, Wykeham Professor of Ancient History in the University of Oxford. We sent it to him again and received it

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back with several remarks added. We have his authority to print the following note combining the information in the two letters :—

The exploration of submarine antiquities has been much discussed ; but little has been done owing to the great practical difficulties involved. The present facilities for submarine research and for salvage probably make possible much that was out of the question formerly.

The whereabouts of the wreck containing part of Lord Elgin's collection is not precisely known. Wrecks of ancient ships have been only rarely located.

Sites of sea-fights are of course better identified, though not many with precision. Salamis has been 'dragged' a little, but without success, though one would not expect much subsequent silting there. Unfortunately this bay has been used so much as an anchorage for large war-vessels, especially during the War, that much damage may have occurred. Nothing appears to have come from Syracuse ; Actium is probably silted ; Ladé is now about a mile inland, owing to siltage, and the bottom is much too deep for excavation. Besides, war-ships do not carry cargoes of works of art, and the bronze beaks and other fittings would be very unmanageable, even if they were found, in deep water. The great difficulties encountered in the recovery of Caligula's state barges, in shallow water, where it was possible to drain the lake, give some idea of the risk of involuntary damage at greater depths to constructions which must be essentially of timber.

But aerial reconnaissance will greatly increase the efficiency of submarine exploration. I have never myself seen a wreck in deep water ; but where the bottom is white sand, I have seen rocks and large tufts of seaweed easily from on deck in 6 or 8 fathoms, and I remember a sudden reversing of engines and 'hard-a-port-ing' of helm in 22 fathoms over a patch of 'white ground' off Kos on a bright day. From the air, in calm Mediterranean water, the general contours of the bottom can be made out a considerable distance from shore ; but as I had no chart with me when I was up, I cannot give absolute depths.

At Navarino (I am told) the Turkish fleet is clearly visible, and also the wreckage of an earlier sea-fight between galleys, probably Turkish and Venetian. But I know of no ancient site where there is actual evidence of wreckage.

British Excavations at Constantinople

by D. TALBOT RICE

THE study of the archaeology of eastern Christendom is as yet still in its infancy and the students of east Christian and Byzantine art have been few and far between in England. But of recent years there has arisen a new and more general interest in the civilization which was so violently condemned by Gibbon, and work both of a theoretical and of a practical character has been undertaken on a wider scale. With the theoretical or purely scholastic aspect we are not here concerned ; but it seems of interest to present a brief survey of the actual work which has been undertaken by British investigators at Constantinople, the very centre of the Byzantine civilization.

During the last four years excavation on a larger or smaller scale has been in progress, and six separate sites have been examined more or less elaborately as funds have permitted. In 1927 and 1928 a large Expedition, supported by the British Academy, was in the field. In 1929 and 1930 funds were raised in England for work of a more modest nature, but the results were none the less interesting and in one instance discoveries were made which can well be classed within the realms of the sensational.

In 1927 the British Academy Expedition, led by Mr Stanley Casson of New College, Oxford, undertook the investigation of the Hippodrome, a structure of far greater importance at Constantinople than in other cities of Roman origin, for it served the purposes of stadium, theatre, parliament and general meeting place alike. Built by Septimius Severus in pre-Byzantine times, the Hippodrome has undergone numerous changes and modifications, and today the ancient site is so built over that it was only in one small area on the western side that we were able to examine the outer walls. But our investigations served to establish the exact dimensions as to width and system of construction, and accurate plans were made of the sphendone or southern extremity, the substructures of which still survive above ground. More interesting were excavations along the central line of the race course, the position of which was easily to be traced because of the three ancient monuments which survive today :—the built column of Porphyrogenitus, the bronze serpent imported from Delphi by Constantine,

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and the column of Theodosius, an Egyptian obelisk of Thothmes III, placed upon an elaborately decorated base of early Byzantine work. (Plate I). We found that there was no actual 'spina' separating the up and down sides of the course, as is usually the case in such monuments. Rather there existed a series of monuments, each standing separately from the other. In ancient times there were many more than we see today, and some of those that have disappeared must have been of the first importance. But little trace of them remains and we have to rely on the diverse accounts of travellers and historians if we wish to gather any idea of their character.¹

In addition to the work at the Hippodrome, excavations were carried out in collaboration with the Ottoman Museum, but under Mr Casson's direction, at the Golden Gate, the great triumphal entrance to the city which has remained closed for thoroughfare ever since Byzantine days. The passage was blocked and the magnificent appearance of the gate was greatly marred by a vast accumulation of debris, the greater part of which was removed by us. (Plate II). The excavations were also extended to the small outer gate, which was once adorned by a fine series of bas-reliefs. Sir Thomas Roe, British Ambassador, or rather representative of the Levant Company at Constantinople in the early eighteenth century, had attempted to buy the reliefs, without success. It would have been better for the cause of art had he succeeded, for extensive excavation disclosed the fact that a few fragments only have survived the hand of time and the few fragments are badly broken. The fine work that they exhibit serves to whet an appetite which can now never be appeased.²

The second season of the Academy Excavations, directed by Mr Casson from Oxford and by the author on the spot, was generously supported by Sir Joseph Duveen. We were principally concerned in laying bare a structure adjoining the northeast corner of the Hippodrome, which was known in Byzantine times as the 'Baths of Zeuxippus'. The building was destroyed to a great extent in the Nika riots of A.D. 532, but its former importance is attested by more than one historian. Our prospects were of the brightest, for not only did the final determination

¹ The results of work in the Hippodrome and neighbourhood were published in 1928, under the title 'Preliminary Report upon the Excavations carried out in the Hippodrome of Constantinople in 1927'. *Oxford University Press*.

² The results of work at the Golden Gate will be published by Mr Casson in the near future.

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of the site throw considerable light on the vexed question of the topography of the Great Palace, but also there was a hope of sensational finds. Actually the structure was more than a bath ; it was in fact a kind of museum, in which were preserved the finest of statues imported from Greece and Rome when Constantinople assumed the rôle of the world's greatest city. Our researches proved that fate had dealt hardly with the statues ; a few fragments only had survived. But the bases that had supported them were there, or at any rate some of them, with the names inscribed upon them, and the walls of the once famous baths were in general well preserved. (Plate III). Minor finds, too, were profuse. Most striking was a small but very fine cloisonné enamel ; more important in the history of art were numerous fragments of glazed pottery which, when considered together with those of the previous year, enabled us to undertake a detailed classification of the material. They showed that the ceramic art of Byzantium was one which can be considered on equal terms with those of Persia, Egypt or Italy.³

At the same time a secondary excavation was undertaken in collaboration with the Ottoman Museum and under the direction of Macridy Bey, curator of the Museum, in a Turkish building called Sirmakesh Han, close to the mosque of Bayazid. Preliminary work had disclosed architectural remains of vast proportions and these were uncovered as far as the standing buildings of the Han would permit. Two podia of a large triumphal arch were discovered, and around them were strewn fragments of the arch that had topped them. (Plate IV). Historical data showed us that we had to deal with the once famous triumphal arch of Theodosius the Great, marking the site of the forum Tauri, through which passed the 'mese' or great central street of the city. The unusual decoration of the columns of this arch is of considerable interest in the history of ornament ; the actual construction is important for the study of early Byzantine architecture ; the remains identify the site of a long forgotten structure and finally the determination of the monument shows us the line which was followed by the mese between the Golden Gate and Saint Sophia. Interesting in this last respect were two large tunnels of brick, each some two and a half metres in height, which ran between the podia of the arch, below the surface of the ancient road. These apparently followed the line of the mese, for they were found again by a Danish archaeologist, Mr Wett, during

³ The pottery is published and discussed by the author in 'Byzantine Glazed Pottery'. *Oxford*, 1930.

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recent excavations around the base of the column of Constantine, about halfway between our arch and the church of Saint Sophia.⁴

This marked the close of the British Academy Excavations, but in the following year Mr Casson was able to raise money in England for the investigation of a Byzantine church, Saint Mary Panachrantos, which had been turned into a mosque at the time of the Turkish conquest. It had been ruined by a fire in 1916. The work was carried out in the name of the Ottoman Museum, under the direction of Macridy Bey, and produced finds of the very first importance in the history of Byzantine art. The results will be published in detail in the near future. In the meantime we can offer a view of the church, in which the elaborate work and the fineness of the brick decoration can be distinguished. (Plate v). It shows also the nature of the building, a double church with a third addition on the southern side. Of these the northern church, which originally had five aisles, is the oldest, dating in part from the sixth century. Before the investigations little was to be seen within, but removal of plaster has disclosed remains of a sumptuous decoration. A sculptured cornice marks the tops of the windows and surrounds the base of the dome. The capitals of the piers that support the roof are of the finest, and double columns with capitals attached separate each of the three lights of the numerous windows. The second church, to the south of the former, is of thirteenth century date. It has three aisles, but the northern one is actually the extreme south aisle of the earlier church, which was denuded of its two exterior aisles at the time of the building of the later structure. Here removal of plaster again disclosed fine capitals and cornices, but the work is hardly as fine as that to the north. Both churches were originally elaborately decorated with wall-mosaics, but these were almost all stripped off when the building became a mosque. Finally, to the south again is a long vaulted structure, which was added as a tomb-chamber in the Middle of the Palaeologue period. The architecture is not very ambitious and the tombs were apparently not very rich. But in the debris which covered the floor, both here and to the north, some extremely fine sculptured fragments were found, which belonged not only to the cornices already mentioned, but also to a magnificent arch which bore the heads and busts of the twelve apostles.⁵ With the marble were

⁴ For a description of the work at the arch, as well as in the baths of Zeuxippus, see 'Second report upon excavations carried out at Constantinople'. *Oxford*, 1929.

⁵ The arch has been reconstructed and is now on view in the Ottoman Museum.

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unearthed fragments of ceramic wall revetment; most of them are small, but they are extremely important, for they enable us to date with certainty a distinct type of glaze and pottery. Strewn here and there were portions of marble, white, red or green, incised so as to contain a filling of bone, ivory or 'pâte de verre'. The objects to which the fragments belong can be best classed as icons, though they show a technique hitherto unknown. Certain of them are well enough preserved to permit a restoration of the figures which they bore; on others portions of designatory inscriptions survive, which show that they depicted our Lord, the Virgin or one of the numerous Saints commonly revered by the orthodox church.

A further investigation of the northern church provided even more surprises, for on the roof were discovered four small chapels, one so to speak at each corner of the dome; and close to one of these was found a complete icon of the type just described, which represented Saint Eudoxia. The icon lay with its face to the ground, so that it first appeared as a slab of marble; it must have been laid there by a workman when the church was turned into a mosque, or perhaps at a later restoration in 1631, when the mosque was re-endowed under the name Phenari Issar.

In 1930 work was once more resumed, this time by the author in the district of the Myrelaion. A small church known to the Turks as Budroum Djami survived there and this had always been identified with the well known church of the Myrelaion, which was endowed by the Emperor Romanus Licapenus and in which he was buried, together with various members of his family, in 944. Removal of Moslem plaster showed that the building was never very elaborately decorated and it does not seem as if it can be much earlier than the eleventh century. Historians tell of the richness of the Myrelaion and of the royal tombs it contained, none of which were met with during our investigations. It thus seems that we must seek for the church of the Myrelaion elsewhere. But the Budroum Djami is none the less interesting, for investigations disclosed the fact that it is actually a two-storied church. The ancient ground level is marked by the road in the foreground of plate VI. The accumulation behind the road, which has the appearance of a hill on which the church stands, is actually a filling which hides the lower church. This is a three-aisled construction with roof supported on four columns. At the level of the roof a colonnade or ambulatory about one and a half metres wide, supported on arches, ran around the outside of the building. The vaults can be

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distinguished at the bottom of the walls of the upper church as shown in plate vi. This 'ambulatory' was reached from below apparently at the east end, but no stair has survived. When once reached it was possible to walk all round the building and to enter the upper church by whichever door was desired. The lower edifice, with three aisles, exo-narthex and roof supported on four columns was undoubtedly a church and not a cistern, as some authorities have suggested. Its identity is proved not only by its plan, but also by the absence of a special cement which is invariably found on the walls of cisterns. The vast accumulation of rubbish within, which reached to a level of five metres above the floor, all belongs to the Turkish period.

Our investigations were extended beyond the confines of the small church in two directions. To the northwest a large cistern, already known, was re-examined with interesting results, for it was found that it was actually a construction of mid-Byzantine date which fills up a space bounded by the massive stone walls of a more important building, dating at the latest from the period of Constantine. To the south we disclosed a large circular building with four small angular niches in the northeast and corresponding corners. Within it were strewn numerous architectural fragments from the walls above, among them two complete and three fragmentary double columns of marble, with finely sculptured capitals. The nature of their decoration and the style of masonry of the walls showed us that we had to deal with a building which must be assigned at latest to the sixth century. The remains of an elaborate floor in opus Alexandrinum show that the edifice was of considerable importance. But its nature or purpose is uncertain and its identification will demand considerable historical research.

One feature of the four years' work stands out with striking clearness, namely the vast amount that remains to be discovered about the topography of Byzantine Constantinople. Of the largest buildings of the city we know something, but of those of secondary or even many of first importance, we know practically nothing and the numbers that lie buried and forgotten appear to be without end. It remains for the archaeologists of the future to disclose such of them as may be important in the study of history and art. Constantinople, the greatest capital of the medieval world, who in her day boasted a power as wide and a civilization as accomplished as that of either Rome or Athens, has until now escaped the spade of the scientific investigator. Such work, which was impossible before the war, is now simple of execution, thanks to a new and enlightened régime.

Recent Discoveries in Persia: a review*

by OSCAR REUTHER

Professor, Dresden University

WE publish in the form of an article a summary of Professor Herzfeld's important researches in Persia. He is describing them in a new journal which he has founded for the purpose, and of which four parts have already appeared. This journal is of course indispensable to all students who wish to keep abreast of the work which he is doing. Archaeologically Persia has long been a closed area and it is still by no means fully opened up to scientific research. Professor Herzfeld is working there practically single-handed but H.I.M. the Shah has taken a personal interest in the progress of his work and has accompanied him on some of his expeditions. Such evidence of official interest will be most gratifying to orientalists, and we look forward to the further results which must follow from such influential recognition.—EDITOR.

Ernst Herzfeld has acted for many years as adviser on antiquarian matters to the Government at Teheran, and is now recognized as one of the chief authorities on ancient Iran. The publication of the results of his investigations is very welcome; a second series is also projected—the 'Iranische Denkmäler'—intended to give a detailed description of the monuments recently examined: architectural, archaeological and epigraphic.

It is twenty-five years since Herzfeld first saw the ruins of Mashad-i-Murghab, the Pasargadae of the ancients. He now presents, in the first part of his new journal, a short preliminary account of the excavations by which he has considerably increased our knowledge of the first royal residence of the Achaemenids. The best-preserved monument in Pasargadae is the tomb of Cyrus, which is familiar chiefly through the photographs of Dieulafoy. Herzfeld realized that the portico, surrounding the terraced substructure on which rises the burial-chamber,

* *Archäologische Mitteilungen aus Iran*: edited by Ernst Herzfeld. Vol. I, parts 1-3, vol. II, part 1. Berlin, Dietrich Reimer (Ernst Vohsen), 1929 and 1930. Each volume (2 to 4 parts yearly) RM 20. Review translated by Roland G. Austin, of Glasgow University.

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does not belong to the original plan as hitherto assumed, but is a mosque erected in the 13th century with material robbed from ancient Persian sites. Entirely new discoveries have been made by the excavation (in 1928) of the temple-site, which lies in the middle of the extensive ruin-field of the old city. Two stone altars were long known to be there. Excavation has shown that these stand in a large rectangular courtyard enclosed by a wall ; on the narrow western arm of this court there rises a terrace-structure in six tiers. It is impossible to determine whether the uppermost platform of this structure was merely an open place of worship or had a special temple-chamber erected on it. But in Herzfeld's opinion, there must be assumed the existence of a chamber with a saddle-roof, more particularly because he regards the tomb of Cyrus as a reproduction in stone of such a tiered temple. In any case this newly-discovered shrine at Pasargadae is the oldest, and so far the only known, temple of ancient Persia. Some remains of the palaces were already familiar, for example the ruins previously termed the 'palace with the relief' and the 'palace with the pillar'. Fresh examination of both buildings proves that the former, with its still standing pillar on which is the relief of the winged genius, earlier identified with Cyrus himself, is the great gateway of the palace grounds. The second had already been recognized as the audience-hall of Cyrus, and, as reconstructed, was thought to correspond to the Apadânas of the later Achaemenids in Persepolis and Susa. Herzfeld's excavations have corroborated the earlier attempts at reconstruction made by Dieulafoy and von Bissing-Schuler in so far as they have shown that at the rear of the palace, corresponding to the entrance-hall between the two corner chambers, a portico running along the whole length of the building opened out between pillar-buttresses (*Anten*). The remains of the capitals are of special interest; as in Persepolis, their chief motif consists of the fore-quarters of two beasts placed back to back. Besides the bulls and unicorns known to us from Persepolis and Susa, lions and horses have been used for their decoration.

Our knowledge of the architecture of the ancient Persians has also been considerably increased by the excavation of another ruin lying in the middle of the palace-group, of which a single pillar still remains upright. This is the dwelling-palace of the king, a rectangle of 76 m. by 42 m. with a hall containing two rows of pillars, probably made of wood, before the frontal of the house; the latter is divided into a series of parallel chambers, and in the middle of it is a nearly square room with six rows of stone pillars. Cyrus therefore did not live in a 'Tatcharam'

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like Darius in Persepolis, but in a house of a much more primitive type than the palaces of the later Achaemenids. Parts of the door-relief and remains of the painted frescoes which are preserved afford some idea of the artistic decorations. The whole lay-out of the palace-quarter must have been very extensive. The individual buildings, to which small pavilion-shaped structures were attached, obviously stood in a large garden. A reservoir and pipes for the water-supply have also been discovered. The whole was enclosed by an approximately rectangular wall, and it was defended by a fort on a mound immediately to the northeast. The importance of the excavations, which it is very desirable should continue, lies chiefly in the new light they throw on the earlier stages of ancient Persian art. This is shown to have developed from its own beginnings, and the assertion so often made, that the buildings of Persepolis can only have arisen under the influence of Ionian Greeks, must be rejected as erroneous. The account is illustrated by some photographs of the excavations of the palace, two sketches of the temple, and an excellent map of the ruin-field and its surroundings, the work of Herzfeld's collaborator Fritz Krefter.

Herzfeld also gives much new information concerning Persepolis in a report on the condition of the ruins, written in French and Persian for the Persian authorities, with an appendix containing suggestions for their preservation. All earlier investigators had failed to observe that the palaces to the south of the terrace formed a lay-out with several court-yards, cut off by walls from the audience-halls of Xerxes and Darius; in their midst, in front of the palace of Xerxes, known from inscriptions as 'Hadish', stands a high rectangular platform, possibly a place of worship. Particularly important is the fact that at Persepolis too we now have knowledge of the remains of the city which surrounded the palace-terrace to the south, west and east, besides parts of the city walls and the ruins of a building with the relief of a Fradada, which points to the existence of a temple. The maps, drawn by Krefter, illustrate the topography of the city and the individual ruins. Further details could no doubt be obtained from good air-photographs, taken at a suitable season of the year.

In the second part of his journal Herzfeld reports on archaeological discoveries in Southern Kurdistan and Luristan. In Tepe Giyan and Iznahri, the prehistoric mounds of ruins near Nihawend, many pots were found by peasants, painted in monochrome and of various shapes, closely akin to the pottery of Susa II. Besides these, fine bronze weapons, daggers, lance-heads, arrow-heads, and some very remarkable

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axes were discovered, very elegantly shaped and showing a high technique of casting, ornamented with animal heads and other decorations. They bear a partial resemblance to some of Woolley's finds at Ur, as do also the copper girdle-clasps and diadems and earrings of gold and silver; while other articles correspond to those which are known from European sites, the so-called *Noppenringe* and double spirals. The majority of the seals are signets of the early type found in Asia Minor, while cylindrical seals are rare. The finds from the mound Iznahri, as well as the contents of a megalithic tomb at Silweran near Khurramabad, belong to a culture dating to the beginning of the third millennium. To the south of the ruins of Susa, the rock-reliefs of Malamir bring us to quite another period. They are derived partly from the early Elamite, partly from the Arsacid era, and these latter are important for our knowledge of Sassanid rock-sculpture. Herzfeld gives a representation of such a 'sub-Arsacid' relief, which the British consul in Ahwaz, Mr Monypenny, has recently discovered at Shimba in the Bahktiari country. To the same period, the first century A.D., may be dated the remarkable shrine Masjid-i-Sulaiman, investigated by Herzfeld; this lies in the middle of the oilfields, forming a great terrace of 120 m. by 150 m., on which are the remains of a square-shaped building, probably a fire-temple.

In the remainder of part I (2) and in parts I (3) and II (1) of the new journal is a searching investigation into a subject belonging rather to the domain of history and in particular the history of religion, but all the same of great interest to anyone who is concerned with the archaeology of ancient Iran. This is the much-debated question as to where and when the prophet Zarathustra lived and taught. Herzfeld approaches the problem with a critical survey of the historical and geographical material contained in the sources, the ancient Persian cuneiform inscriptions, the accounts of the Greeks—in particular those of Herodotus and Ctesias—and the Avesta literature. Even though the linguistic deductions of the writer can only be followed by the specialist, yet no-one can deny the sound logic of Herzfeld's conclusions. Briefly summarized, the theory is that Zarathustra sprang from the noble Median family of Spitama and was a contemporary of Hystaspes, who, as head of the younger line of the Achaemenid house, held the satrapy of Parthava together with the district of Zranka (later Sistan), and became a convert to the teaching of the prophet, who had taken refuge with him. His son Spentadata slew the usurper, the Magus Gaumata, and under the name of Darius restored the empire and rule of the Achaemenids, and brought about the triumph of the new creed.

The Lion and the Unicorn

by CYRIL G. E. BUNT

AN interesting discovery, made during the season's excavations three years since on the historic site of Ur, has moved the writer to carry to a conclusion some researches originally started several years ago. Many able pens have been exercised in dealing with the wider archaeological and historic significance of the discoveries as a whole, but the individual objects have as yet scarcely attracted the notice that they, for the most part, deserve.

It is proposed to speak only of one of these objects here—perhaps the most interesting so far unearthed. This is a species of chequer-board with its squares composed of engraved shell plaques framed with lapis-lazuli (see plate). That such a gaming-board should have been preserved thus through the ages is of interest; but even greater interest attaches to the symbolic or decorative motives displayed upon the squares of the board (fig. 1). It will be observed that among the motives referred to is that of the lion and unicorn in opposition.

There is a wide-spread impression, at least among English speaking races, that the legend of the Lion and the Unicorn is peculiarly British. That it is not so may consequently come as a surprise to many who recall the well-known English nursery rhyme :

The Lion and the Unicorn were fighting for the crown,
The Lion beat the Unicorn all round about the town.

These lines have been thought to refer to the heraldic supporters of the royal shield of Great Britain and the Union of England with Scotland under James in 1603 (fig. 2). But the point has rightly been questioned, notably by one writer in *Notes and Queries*¹ who refers, in support of his contention, to two large tapestries in the collection of Prince Borromeo. These tapestries, which are at that Prince's celebrated palace of Isola Bella, Lago Maggiore, he states are 'apparently of sixteenth century or earlier'. One of them represents a lion and an unicorn in combat, with a crown between them. The other depicts the

¹ Series 10, x, 294.

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unicorn being pursued by the lion around a quaint representation of a medieval walled-town, which occupies the centre of the tapestry.

There seems but little doubt that these two tapestries illustrate the old rhyme referred to and are therefore of great interest. There is small chance perhaps of assigning a definite, dogmatic date to tapestries of this period without close examination, but if indeed they are of the sixteenth century they show that the story of the rhyme is a survival of an almost forgotten folk-tradition. The two episodes are so circumstantial—identical in fact—that they must be connected. Even if the tapestries are of later date it is unlikely that they should have been designed to illustrate a popular jingle about the arms of England. We may conclude, therefore, that the story is one of more ancient origin and wider application.

That the legendary association of the lion and the unicorn was a familiar thing in the days of Shakespeare is shown by the words of *Timon of Athens* :—‘ wert thou the Unicorn pride and wrath would confound thee, and make thine own self the conquest of thy fury ’. The reference is of course to the legend as met with in the old bestiaries, such as Gessner’s *Historiae Animalium* (1551–87), Topsell’s *Four-footed Beasts* (1607), and others. In Spenser’s *Faerie Queene* we have it admirably expressed :

Like as the lyon, whose imperial powre
A proud rebellious unicorn defyes,
T’avoide the rash assault and wrathful stowre
Of his fiers foe, him to a tree applies.
And when him running in full course he spyes
He slips aside ; the whiles that furious beast
His precious horne, sought of his enemyes,
Strikes in the stroke, ne thence can be released,
But to the Victor yields a bounteous feast.

It was a time, as we know, when travellers’ tales of fearful and wonderful animals, seen during protracted sojourn in the ‘ mysterious East ’, gained ready credence—a time when the unicorn’s reality was implicitly believed in.

The rich symbolism of the medieval Church embraced the unicorn now as the type of Christ, now as an emblem of purity. But the lion and unicorn together seem to have remained for ages almost entirely in the less exalted realm of popular folk-lore. That, even so, they were nevertheless sometimes employed in a quasi-religious manner we shall



FIG. 1. Chequer-board found at Ur



FIG. 2. Supporters of the British Royal Shield



FIG. 3. Device on banner of Ermak



FIG. 4. Panels from ivory throne of Ivan



FIG. 5. Page from MS. in Bibliothèque Nationale

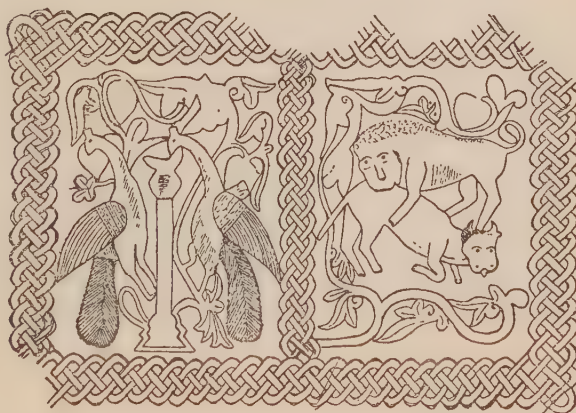


FIG. 6. Carved relief, Mount Athos

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see later ; indeed a vestment powdered with them is mentioned in an inventory of the time of Henry VIII, in 1530.

In tracing the history of their close association backwards through the past, as we propose doing, it is only natural that we should look towards the East, whence so much of our legendary lore has come. And first we will look to Russia, that strange barbaric land where Eastern and Western cultures seem to have coalesced, producing a civilization neither oriental nor occidental, but simply Russian.

About ten years before Spenser published his *Faerie Queene*, the famous Cossack chief Ermak, hero of a hundred traditions and songs of the Don Cossaki, was engaged by the merchant Strogonovs to further their trade among the Tatars of Tobolsk. This outlawed chief of the wild Cossack tribe, who conquered Siberia in 1581, and then laid the vanquished province at the feet of Ivan the Terrible, carried with him three standards which are still preserved in the Oruzheinaia Palata at Moscow. One of these bore as an emblem a dove, the other two each the device of a lion and unicorn disposed for battle (fig. 3).

Without leaving the galleries of the Oruzheinaia Palata we can discover an earlier example. For here, among the objects in the one-time Imperial Treasures, stands a celebrated throne of carved ivory. It was a wedding gift from Byzantium upon the occasion of the marriage of Ivan III, in 1469, to Zoe, daughter of Thomas Palaeologus the brother of the last emperor of Byzantium. In consequence of this alliance Russia assumed the device of the double-headed eagle, and this device occupies the central panel of the back of the throne. But the flanking panels, easily next in size and importance, are carved, one with a lion, the other an unicorn, among scrolled foliage in relief (fig. 4). Above the lion, perched on a branch, is a dove, the significance of whose presence will be referred to later.

The fact that this throne is of Byzantine origin is important to remember, as contributory to the due appreciation of another example of the lion and unicorn of the same (fifteenth) century. In the Bibliothèque Nationale, Paris, there is a Greek manuscript of the Proverbs of Solomon and other fragments, including pharmaceutical recipes. Incorporated with one of these is a painting representing a tree with fruit and a youth standing between the branches eating of the same (fig. 5). On either side on the high twigs sit two parrots, below them at the side are two storks and near them a lion and an unicorn. At the root of the tree are two mice, one black and one white, who nibble into the trunk. Now in spite of its presence in this fragmentary,

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FIG. 7. On an ivory casket in Berlin Museum (11th or 12th century)



FIG. 8. Attic fragment, Acropolis Museum, Athens

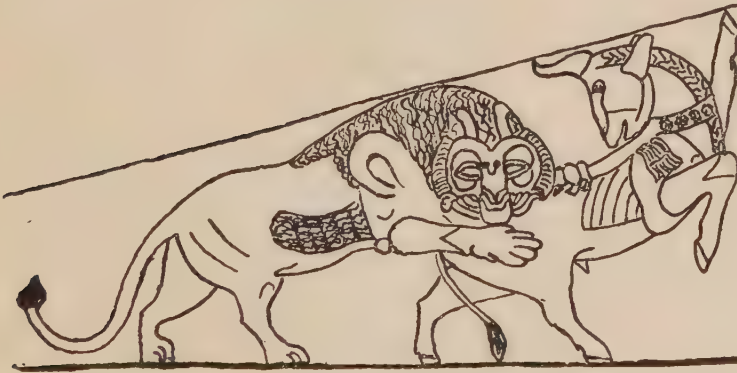


FIG. 9. Relief, stairway of Palace of Darius



FIG. 10. Engraving on Ostrich Egg, British Museum

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fifteenth century manuscript, this picture depicts an episode in the quaint medieval romance of Barlaam and Josephat, with which, in some way, the lion and unicorn tradition has some connexion.

Briefly, this was a Buddhist story brought from India in the seventh century by a monk of St. Sava Monastery. Its theme includes the story of a youth, pursued by Death, who takes refuge in the Tree of the Pleasures of the World. The mice eating into its root, so that presently it will fall, are day and night—the passage of time.

This Paris manuscript is not the only instance in which this incident is depicted with the lion and unicorn present. It occurs again on one panel of an ancient door of bronze at the Uspenski Monastery of Aleksandrov, Vladimir government, Russia. From an inscription thereon the date of the door is fixed as fourteenth century (1336).

With this example we will leave its association with the interesting old romance referred to and its clearly defined use in Christian symbolism, but may note the occurrence of the lion and bull in combat as a Christian symbol so early as the twelfth century. It occurs as one of a series of carved stone panels in the famous Monastery of Mount Athos, and it is associated with other mythic beasts—gryphons and sirens—and the pine-cone, which are all motives common to Syrian art of pagan times (fig. 6).

Equally Syrian in feeling is the next example to be considered. It occurs upon a beautifully preserved ivory casket of the eleventh or early twelfth century in the Kaiser Friedrich Museum, Berlin (fig. 7). It is significant that this is of Syro-Egyptian workmanship and decorated with animal groups and birds, carved in relief. Among these the lion and unicorn group occurs in a similar attitude to that of the last example, *i.e.* with the lion seizing the unicorn by the flanks. This attitude in point of fact is the one usually manifested in the numerous examples that are met with in the earlier ages.

The motives upon the Berlin casket are familiar in Mycenaean Byzantine-coptic, and Perso-sassanid art. And that the lion and unicorn are there depicted is clear, although the latter animal has a bovine look. He has undoubtedly but one horn, in one figure twisted in the approved unicorn fashion, in another conventionalized in a foliated manner. In one compartment, perched upon the back of the bovine animal, is a bird.

We are here on the threshold of a period when we get ample evidence that, in these days, the lion and unicorn, the lion and bull and even the lion and gazelle were identical. The proof that the symbolism

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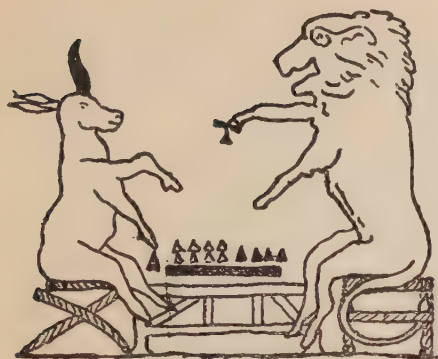


FIG. 11. Drawing from satirical papyrus, British Museum



FIG. 12. From a Chaldean tablet, 6th cent. B.C.



FIG. 13. Incised slab, Merkes quarter, Babylon



FIG. 14. Fragment from Sumer



FIG. 15. The Sun-god, Lagash, between Lion-crowned pillars

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of these variants is identical lies as much in the region of psychology as of logic. For, apart from actual demonstration, one feels that wherever the group occurs the self-same tale is told. After all this is a basic essential of all truly significant symbolism.

Another Egyptian example, a small panel of the same period, on which the two beasts are carved in relief, was exhibited at the Munich Exhibition of Muhammedan Art in 1910. Both these examples are of course of post-Coptic age, but the influence of Alexandria—the city of Euclid—had not died out. Roman art drew therefrom largely also, notably in the arts of painting and mosaic. So it is not inappropriate that our next earlier example should be drawn from Roman Europe.

In 1830 a most interesting discovery of Roman gold and silver work was made at Berthouville, near Bernay (Eure), in France. This treasure (now in the Cabinet des Medailles, Paris), included a fine plate or *discus* of silver. Round the upper rim is displayed, in relief, a spirited series of animals in pairs. Among them are the lion and unicorn confronting each other; and, as the piece is ascribed to the Gallo-Roman epoch (first to third century), it takes us in our enquiry over eight hundred years further back. To about the third century also is ascribed the wall painting of a grave chamber in Palmyra, in the Roman style, on which we see several times repeated a lion pursuing a gazelle. A fine, though fragmentary, representation of the subject again is to be seen on an interesting Attic marble in the Museum at Athens (fig. 8). This is at least a century earlier and may even date from the first century of our era. Its occurrence on certain medals of Sinope and Tarse testify to the spread of the myth among the Greeks of the Satrapies.

Passing to the pre-Christian period we find so many examples that only one here and there can be selected for remark. It becomes increasingly difficult to differentiate between the opponents of the lion, although he himself is invariably unmistakable. The unicorn, the bull, or the gazelle seem to have been selected at pleasure. And here we may mention a very significant point—it is invariably the lion who gains the victory in the fight.

As for the opposing animal, where it is the bull, particularly in Assyrian art, the artist more often than not has represented the animal in perfect profile and, logically enough, shows only one horn. Thus the animal is, to all appearance, an unicorn. It was doubtless the verisimilitude of such representations seen upon the bas-reliefs, etc., that led early travellers to vouch for the actual existence of the unicorn.

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In the Hermitage, Petrograd, there is a celebrated relief of Cybele (Goddess of the earth), along the base of which is a frieze depicting the lion and bull in combat. It is of Greek workmanship of the third century B.C. We will speak of this connexion with the goddess later. In the Hermitage also is to be seen an example of the fourth century B.C. on the wonderful Chertomlyk quiver-sheath of beaten gold, a *chef d'oeuvre* of Graeco-scythian art. But probably the most notable example of this century is to be found at Persepolis, Darius' old capital of the Persian Empire. It forms a striking part of the decoration of the stairway of Artaxerxes Ochus, the approach to the Palace of Darius, constructed 358-340 B.C. On either side is a colossal representation of the lion and bull, or unicorn, for it has the conventional single horn protruding forward (fig. 9). The lion has pounced upon its opponent and has seized it by the flanks, and the group is wonderfully realistic in its essential details. One may say that this is a characteristic attitude of the two beasts at this, the time of its most prolific manifestation. It is found engraved on Babylonian and Assyrian cylinders, on the vases, seals and sculptured stones of the epoch of the Atrides, and is carved on the tomb of Xanthos. In the British Museum is an engraved ostrich egg from a Phoenician tomb, (about VII century B.C.), on which the subject again occurs (fig. 10).

A curiosity which in every way is most remarkable is to be found in the pages of an Egyptian satirical papyrus likewise in the British Museum. It is dated in the period of Rameses III (about 1200 B.C.), and depicts a remarkably well-drawn lion and an undoubted unicorn each sitting on a low stool playing a game with chess-like pieces on a board between them (fig. 11). If this is a satire and not in any sense symbolic at least it certainly shows, not only that the myth of the lion and unicorn was known at that date in Egypt, but that it was sufficiently popular to give the allusion point. It also suggests that the myth had probably some close association with a chess-like game.

An interesting example on a Chaldean cylinder of green marble has a bull evidently pursued through a country of great plants by the lion, who has seized it by the back leg and grips it with the other paw on the flank (fig. 12).

The Assyro-Babylonian period gives us more than one example of the two animals on coins of Croesus. There is one in the Cabinet des Medailles, Paris, showing the heads only, and here again the bull has but one horn. The coin was struck between 560 and 546 B.C. But Babylonia provides us with a very much earlier example—a tablet

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turned up from the earliest stratum on the site of the Merkes quarter of the ancient city of Babylon. Found among cuneiform tablets of the period of Hammurabi (2250 B.C.), it is incised with the figures of the lion and bull in combat, characteristically grouped (fig. 13).

One of the most ancient representations of the antagonism of the two beasts is that on a fragment of shell—a section of a bowl—from Sumer (fig. 14), that ancient, pre-semitic seat of civilization out of which the great Babylonian Empire rose. This small piece has been assigned to the epoch of Ur-Nina, one of the earliest kings of Lagash who reigned somewhere about 3000 years B.C. On it is engraved the familiar scene of the lion seizing the bull (again in this specimen it has only one horn), and, though somewhat rough in execution, it is unmistakably the very subject we have traced back through five thousand years. And now, on the gaming board from Ur, we have a representation that may be as early as 3500 B.C.

The extraordinary persistence of the subject through fifty-five centuries of symbolic art would lead us to surmise that it has its origin in something deeper than mere fancifulness—something far more important to mankind than the mere record of a natural antipathy between two animals, one mythical. Its exceeding antiquity points to the fact that the root idea of which it is the symbol must have been the perception of an event of great importance to man. In a word, it must be looked upon as a religious symbol.

To the Sumerians, Babylonians, Assyrians—indeed to all primitive people—one of the chief events ever recurrent in their lives was the coming of Spring. The sequence of the seasons is personified in their hierarchy and, as a preliminary to the full effulgence of Summer, the Sun-god finally vanquishes the powers of Winter during the season of Spring.

But the ancient nations just enumerated were by no means ignorant. They were, in their day, the civilized world. Among their attainments not the least remarkable was their knowledge of the heavenly bodies. Hence their religion was greatly astrological and their symbols those which are familiar in astronomical nomenclature today.

Now although every one is familiar with Cancer and Capricorn as being the solstitial signs since classical times, it is not so well known that in pre-classic times the solstices occurred in Leo and Aquarius. And it is to these pre-classic times that the earliest vestiges of the myth of the lion and bull (or, with its one horn, one may legitimately say, the unicorn), have been traced. But the most significant fact for us is

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found to be, that, at this period, when the Summer solstice was in Leo (the Lion), the Spring equinox was in Taurus (the Bull). Spring, the bringer of new life to the earth, was inevitably followed by Summer's fierceness. Thus we may say that the lion and bull (generally with one horn be it remembered), symbolize the triumph of Summer over Spring.

But we must remember, too, that it would not merely commemorate the natural fact. It would necessarily assume a religious aspect, for the progression of the seasons under the sway of the solar gods is exalted in the Babylonian as in all primitive religions. And although certain very telling arguments have, with show of reason, been brought against the theory of Astral theology as a complete system, yet it is an admitted fact that the religion of ancient Babylonia was largely composed of solar myths. The Solar-god held premier place and we find the dawn myth depicted on the tablets with the Sun-god, Shamash, issuing from the portals of dawn—a pillar on either hand surmounted by the lion, symbol of the god (fig. 15).

As time went on there was a tendency (as pointed out by King, an excellent authority), for Shamash of Sippara to absorb the lesser solar gods, which led to 'the differentiation of the functions of Shamash during the various seasons of the year and the various times of the day among these minor deities. In this way Ninib, whose chief seat appears to have been at Shirkulla (Lagash), became the sun-god of the springtime and of the morning, bringing joy and new life to the earth, while Nergal of Kutha was regarded as the sun of the Summer solstice and of the noonday heat—the harbinger of suffering and death'.

Does not this, all unexpectedly so far as King is concerned, take us to the very heart of the myth whose iconography we have been considering? I am convinced that it does.

If support were needed we might refer again to the Cybele relief in the Hermitage where the lion and bull frieze has evident bearing upon the veneration of the Great Mother of the Gods and the Sun in Leo and Taurus. In classic times Cybele, with her consort Attis, symbolized the relations between Mother Earth and her fruitfulness. They were worshipped annually at the Vernal equinox. The pine-cone, fruit of the Babylonian Tree of Life, was a symbol of Cybele and it is found among the motives associated with our subject, even so late as the eleventh century, on the ivory casket at Berlin. The pine-cone is also closely associated with the Mithraic cult and we may recall that Mithras was identified with Shamash by the Chaldeans and with Helios by the

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Greeks of Asia Minor. The dove is almost always present in the Mithraic sculptures and also occurs occasionally with the lion and bull. This bird was the ancient sign of the Pleiades and its significance is explained by the fact that at the epoch when Taurus was the equinoctial sign of Spring the sun rose with the Pleiades. How even this detail has survived the ages is seen by the dove on the ivory throne of Ivan III (fifteenth century), and on one of the banners carried by Ermak, together with others bearing the lion and unicorn in the conquest of Siberia (1581).

Another point must be touched upon—the significance of the lion and unicorn in the illustrations of the Barlaam romance. We may recall the presence of the two mice, one white, one black, nibbling at the root of the tree. They symbolized day and night. The lion and unicorn, set likewise on either hand, may doubtless be looked upon as a further pious hint of the passage of time—the progression of the seasons—Spring giving way to Summer, joy and youth inevitably being followed by suffering and death.

The example on the Sumerian shard is now, by the discovery of the broken gaming-board of Ur, perforce relegated to a secondary place in point of antiquity ; for, by Mr Woolley's computation, the latter is more ancient by about five hundred years. This of itself is interesting as it takes us back well to the middle of the fourth millennium B.C. But the occurrence of the device of the Lion and Unicorn, as an appropriate motive of decoration for such a board, may perhaps be sufficient to suggest that the game for which it was used was an early species of chess, analogous we may surmise to astronomical chess of later centuries. The twelve squares would support this hypothesis.

That mythological or symbolic figures were not unknown upon chess-boards, even so late as the medieval period, is seen from an example exhibited at the Munich Exhibition of Mohammedan Art, 1910, (vol. IV, no. 3502). But just how definite an import these or similar figures might have in reference to the game it would be difficult to say. In all probability little more may be postulated than an appropriate piece of symbolism for a game which was in essence a combat.

Yet early references to the game in India and Persia show that at least sometimes considerable symbolic value was attached to the game of *Chatrang*. Thus we have the *Chatrang-namak* among the oldest MS. of Pahlawi works (1323), which relates the supposed history of the game. The author, (I quote the version given by Murray in his *History of Chess*), puts into the mouth of Wajūrmītr the words : ' I

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fashion the board of New-Artakhshir in the likeness of the land of Spandarmadh, and I fashion thirty men in the likeness of the thirty days and nights ; I fashion fifteen white in the likeness of day and fifteen black in the likeness of night ; I fashion the movement of each after the likeness of the movement of the constellations, and in the likeness of the revolution of the firmament'.

Among the various modifications derived from Indian chess is the Spanish form *Grande Acedrex*, played on a board of 12×12 squares, and among the names of the pieces we find both the Lion and Unicorn. Also in the circular-chess game of *Los Escaques*, the board has seven rings each divided into twelve parts—each 'house' being allotted to one of the signs of the Zodiac. It is played by seven players with seven pieces, and it therefore may be more than mere coincidence that with the board from Ur there were found seven square pieces, black with five white spots on them, and seven squares of white pearl engraved with animal figures.

In the present state of our knowledge it would of course be going too far to suggest that the game of chess, or even the dice-game *nard*, its forerunner, was played in ancient Sumer. But there would seem little doubt that on the gaming-board of Ur, where the Lion and Unicorn or Lion and Gazelle occur, we have a symbolized allusion to the traditional antagonism of the Sun-god of Spring rising in Taurus, and the Sun-god of Summer which rose in the sign of Leo. And the Sun in Leo is invariably the victor.

Yucatan: New Empire Tribes and Culture Waves

by J. LESLIE MITCHELL

IN the first of these papers* dealing with certain problems in the history and archaeology of Ancient America an account was given of the Maya Old Empire and the possible causes which lead to its collapse in the fourth or sixth centuries A.D. The whole tract of Xibalba was probably deserted, its inhabitants scattered, and the alien theocracy which had inspired a great semi-civilization destroyed.

But to the north and south of the Old Empire area there presently ensued a diffusion of Mayoid culture impossible but for the catastrophe or series of catastrophes which depopulated such great sites as Copan, Uaxactun and Palenque, leaving them abandoned for 1500 years to the investigatory prowlings of snakes, pumas, and, culminatingly, of such fauna as that Noah O. Platt whose name J. L. Stephens found carved on the walls of the Palenque palace. 'From archaeological evidence it would appear that Maya culture spread by way of Oaxaca up to the Valley of Mexico. Here, fostered by the Toltec, it took root and flourished with such vigour that, at a still later period, it had a profound influence on the arts and crafts of the Totonac of Vera Cruz'.¹ Southwards, like influences appear to have inspired the Coclé culture of Panama and even spread through the Panama neck into South America, leavening the beginnings of the Andean pre-Inka barbarisms. Meanwhile, the Xibalban city-builders themselves disappeared without further record.

It is again necessary, however, to emphasize the fact that Old Empire history is entirely without record, apart from the innumerable datings on its monuments. The very name Maya was probably unknown in Xibalba. Not only has no contemporary written account of its history and downfall been found and transliterated, but, in

* ANTIQUITY, September 1930.

¹ T. A. Joyce, *British Museum Guide to the Maudslay Collections of Maya Sculptures*.

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subsequent American cultures apparently inspired by it, there is no scrap of tradition that can be definitely identified with the Old Empire. The myths of the barbarous Quiche of the Pacific coast do indeed allude to a nebulous 'Xibalba' which the present writer accepts as a reference to the Old Empire. But such an acceptance is only tentative, and one with which few Americanists agree.

Yet, in spite of lack of reference to an historic Xibalba, the Spaniards who landed in America a thousand years after its collapse discovered on the neighbouring peninsula of Yucatan a race now generally identified as the descendants of the Old Empire population. The identification cannot be regarded as more than partially proved. The thousand years of Yucatecan history is a blur of uncertain traditions, myths, legends—some of which point towards cultural and racial influences radically un-Xibalban. Yucatecan art, architecture, sculpture, script and calendar appear not so much debasements of their Old Empire counterparts (the architecture has improved in technique as it has degenerated in imaginative concept) as half-alien variations on a half-forgotten theme. In consequence of the curtailment of the ancient calendar, Yucatecan buildings lack the profuse datings of the Old Empire sites, with the result that Yucatecan tradition-history is almost entirely dateless but for the record of a single family-group—the Tutul Xiu, whose name suggests an un-Mayan origin and whose apparently meaningless wanderings across the antique Central American scene still induce almost as much confusion among Americanists as they probably did among the Xius' contemporaries.

The purpose of this paper is to suggest an outline of the Yucatecan cultural phases and the racial and migrational causes from which those phases originated. The multitude of material uncorrelated in any such framework remains productive not only of ludicrous perennial theorizings in the popular press on the subject of 'mysterious' Yucatan, but leads such authorities as Captain Joyce and M. Genet to identify the great figure of Quetzalcohuatl-Kukulcan variously as 'the ripple or catspaw, born of wind and water, the aspect of which suggests feathers, and the motion a snake', and as an actual Toltec general, with biography and pedigree!

Some synthesis is required of the data available to the modern world from the following four sources: *The Books of Chilán Balam*, laconic and frequently contradictory records of the history of the Tutul Xiu family-group already referred to, written in the Zuyua (literary Yucatecan) tongue but in Latin characters; the legends and myths collected

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by the early and mid-occupation Spaniards, especially the clerics Landa, Lizana, Cogolludo, and the historian Herrera; the scanty datings, according to the Old Empire 'long-count' system, found in two, or perhaps three, Yucatecan sites; the architecture and sculpture of the New Empire ruins.

The *Chilan Balam* record opens with the statement that in a 'Katun 8 Ahau' (probably A.D. 163) the Tutul Xiu, under the leadership of Holon Chantepeuh, set out from Nonoual, 'to the west of Zuiva and in the land of Tulapan'.

All three localities have been identified with various portions of the New World. The Abbé Brasseur de Bourbourg² would have Nonoual in Oaxaca, Toltec territory, and sees Holon Chantepeuh's exodus as a drifting raid of aliens into Maya country. MM. Genet and Chelbatz³ substantially agree with their countryman, but place Nonoual in Acallan, west of the Laguna de Terminos. Captain Joyce, on the other hand, finds it 'at present unidentified, but almost certainly somewhere in the Central Maya area'.

The French historians, believing in a Nahua origin for the Tutul Xiu, conclude that 'Tutul' probably meant 'Toltec'. It is certain that long years afterwards the enemies of the Xiu, the Cocomes and other Itzas, were in the habit of dubbing the Xiu 'strangers', in the sense of the Greek 'barbaroi'. Also, the Xiu notabilities themselves seem to have religiously eschewed the 'Tutul' from their personal names, *e.g.* Nachelxiu.

Now, in A.D. 163, if the Bowditch correlation of the Old Empire and Gregorian calendars is correct, Palenque, the Xibalban Florence, ceased to date its monuments and was presumably deserted, as were possibly other northern sites such as Comalcalco and Ococingo. The eruption of the 'Toltec' Xiu may have had connexion with a great barbarian raid upon those cities—a raid from which the Xiu did not withdraw, for forty years later they settled at 'Chacnouitan', another unknown site, but one, it is safe to conclude, somewhere on the borders of Xibalba and the still uninhabited peninsula of Yucatan. As early as A.D. 200, as is now known from the recent discovery of various small sites, emigrants from the still-flourishing Old Empire cities of northern Chiapas were slowly advancing towards the Rio Hondo and its confluents. 'Chacnouitan', with the Tutul Xiu in the role of 'Mayaized' barbarians, may have been one of those emigrant settlements.

² Notes to *Relation des choses de Yucatan*, 1861. (A translation of Landa's ms.)

³ *Histoire des peuples mayas-quiches*, 1927.

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This synchronization of events is justified if the dates in the various *Chilan Balam* records be treated selectively. For, about 100 years later, *c.* A.D. 300, the Tutul Xiu are stated to have abandoned Chacnouitan, and by A.D. 300 the Old Empire was crashing to its fall; Copan, Uaxactun, Menché, Quirigua, Ixkun deserted, possibly in a wild confusion of famine and civil war which also affected the Xiu settlement. But of those events the Xius, if implicated in them, left no account. They emerge out of the darkness of over another hundred years with the laconic statement that, *c.* A.D. 420, they 'discovered (and presumably settled in) Zian Caan'—another name for Bakhalal in southern Yucatan.

There, for the moment, they may be left, while consideration is given to the movements of other refugees from the fall of Xibalba. As has been stated before, the Yucatecan Maya, though obviously culturally influenced by the Old Empire, had no definite record of racial relation with it. But it is at least possible that the traditions of the Great and Little Descents were based on facts, and throw some light on the fate of the Xibalban survivors.

No such possibility of myth enshrining history was regarded as warrantable by most of the Americanists of last century, headed by Dr D. G. Brinton. Dr Brinton imposed on nearly every American tradition or legend a 'sun-myth' interpretation which still lingers. But the theory of the inevitable creation of gods or symbolical heroes to fit the facts of natural phenomena is, if not discredited, recognized in American archaeology as only partially explanatory. The deification of culture-heroes must be regarded as at least complementary to their creation.

According to Lizana⁴ the legend of the Great Descent describes the invasion of Yucatan by Itzamna and his following. This invasion came from the west. MM. Genet and Chelbatz, accepting the Great Descent as the migration of actual tribes, assign its origin to the Laguna de Terminos. Though their *Histoire* is in some respects rendered valueless by an unfortunate 'Toltec complex', and an apparent ignorance of the results of the last fifty years of excavation, it is at least possible that refugees from the middle and lower Usamacinta sites of the Old Empire pressed northwards into Yucatan in a great host or hosts through the Laguna de Terminos region. Civilizing the country and settling Champoton en route, Itzamna (an idol borne in a litter at the

⁴ B. de Lizana, *Historia de Yucatan*, 1633.

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head of the invading tribes or an actual leader bearing the name of his god) passed northwards through the barren limestone wastes of modern Campeche, and built at a suitable spot the city of Chichen Itza—the Wells of the Itza.

No dates are, of course, given for this migration. But Chichen Itza, Tulum on the eastern coast of Yucatan, and (a doubtful case) the small site of Xcalumkin are the three New Empire localities which possess buildings inscribed with dates according to the Old Empire calendar. The Chichen Itza date is approximately A.D. 350, the Tulum one approximately A.D. 300.

Either, therefore, the Great Descent was in the nature of a rapid march of refugees from the scene of the Old Empire collapse, reaching northern Yucatan several years before the final abandonment of Xibalba, or—the generally accepted belief—Tulum and Chichen were cleruchies of some Old Empire city, colonized by sea before its fall. Itzamna and his tribes of Maya Itza may not have arrived on the scene until at least A.D. 400, and either captured these cities or re-peopled them.

It was a desolate enough country into which the Great Descent had come from the riverine cities of Xibalba. There is little or no surface-flow of water in Yucatan, but cenotes, great natural wells, appear in the limestone. Round these, or, where they did not exist, excavating the artificial chultunes, the Itza commenced to rear the single-storied temples and palaces of the Old Empire. What proportion of the invaders was composed of artists and craftsmen who had escaped the Xibalban *débâcle* it is impossible to tell, but the spiritual impulses behind the art manifestations of the ancient culture were certainly more than half-forgotten. Carving of the distinctive statue-stelae of the Old Empire soon ceased. Of Sayil, probably one of the early cities built—in company with Itzamal and Zama—by the Maya of the Great Descent, Dr Spinden says⁵ ‘the sculpture is very flat and crude, but the free and easy postures indicate that the crudity comes from decadence rather than inexperience’. The ‘katun count’, a crippled version of the complicated ancient calendar, and signifying an almost complete loss of mathematical attainments, came into vogue. Nothing is certain of the personnel of the migration, but there were probably few pure-blooded survivors of the distinctive class or race which, there is good reason to believe, had ruled Xibalba as a gigantic

⁵ *Maya Art*, 1913.

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theocracy. The warrior cacique, the halach uinic or 'real man', had appeared in Maya history, owning feudal allegiance to Chichen or some such centre, ruling his town or village in which a degraded class of masons and artisans still built and decorated, priests—heirs probably in little more than name to the artists and astronomers of the Old Empire—sacrificed and prophesied. The mass of the population, probably serf-agriculturists, cultivated the milpas or maize-plantations round each centre, forgot Xibalba, and already regarded the leader of the Great Descent, buried in the Mausoleum of the Itzamatul at Itzamal, as divine.

This is a possible picture of northern Yucatan in the sixth century A.D. Both architectural and sculptural evidences are uncertain, owing to the overlaying of later centuries, but careful research, especially in the centre of the region of modern Campeche, may reveal indubitable examples of the building and art motif of this period.

But this settlement appears to have accounted for only one portion of the Old Empire refugees. From the east, according to Lizana, a new leader with a group of followers descended on northern Yucatan. Such descent (unless, which is extremely unlikely, it was a raid of Caribs across the sea) could have come only from the southeast, from the region of Bakhalal, where the Tutul Xiu had settled.

The Books of Chilán Balam appear to confirm the separate tradition. They record that, c. A.D. 500, the Xiu 'discovered' Chichen Itza and 'were accepted as lords of the land'. This, there can be little doubt, was the Little Descent, probably made by the Xiu at the head of a host descended from the inhabitants of the northern Chiapas and Honduras cities of the Old Empire. Possibly Chichen was forcibly captured and the surrounding country laid under tribute. There is no record of this but it is stated that the Tutul Xiu, no doubt in a politic endeavour to conciliate the surrounding Itza Mayas, 'called themselves Itzas'.

Whatever cultural influences the Little Descent brought are now unidentifiable, but the Tutul Xiu appear to have remained obstinately alien in Itza eyes. About 120 years after its capture Chichen, according to one version of the Tutul Xiu chronicles, was 'abandoned', according to another 'destroyed'. The Xiu were, in fact, probably driven from the capital by an uprising of the subject Itza populace and set to wander Yucatan for another eighty years until, c. A.D. 700, Champoton was 'seized' by them.

If brevity be the soul of wit, the *Books of Chilán Balam* are among the most mirthful records in existence. At this point their

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brevity introduces a new complication, and one that appears to have entirely mislead such modern Americanists as Dr Gann⁶ and Mr J. Eric Thompson.⁷ The Xiu who came with the Little Descent to the conquest of Chichen thereafter 'called themselves Itzas', and it is as 'Itzas' that they are thereafter referred to by their chronicles. Accordingly, the abandonment of Chichen, *c.* A.D. 620, has been taken as a desertion of the land by the Itza populace, another example of the mysterious 'desertion complex'. As careful study of the records show, there is no warrant for this belief. So far from deserting Chichen, the Itzas probably re-occupied it again, while the Tutul Xiu, the 'barbaroi' who had remained unamalgamated in spite of their desire for naturalization, were evicted.

For nearly 250 years after recording the seizure of Champoton, the Xiu chronicles maintain a complete silence. It is two and a half centuries of complete darkness in the history of the Yucatecan Maya, and it is indeed improbable that even the most intensive archaeological research and excavation will succeed in illuminating it. As has been said, New Empire buildings are mostly undated, and in consequence any judgement of the art of this period is rendered almost impossible. Probably it neither remained static nor (so far as architecture was concerned) declined, as has been supposed. Profiting by ages of experience, living in years otherwise a cultural coma, and without distracting considerations of elaborate mural decoration or group rhythm, the Maya mason succeeded in gradually widening, heightening, and altogether 'fining' his buildings. Pottery-making and textile-making probably remained at the general level of Xibalba. Priests coned the ancient scripts and copied them. Serfs tilled the great plantations. City batabs or governors, the 'real men' of the country, hunted and possibly indulged in occasional civil war though the settlements were grouped in a loose hegemony under the leadership of Chichen.

The ruling Chichen family of this period MM. Genet and Chelbatz identify with the Cocomes, later the rulers of Mayapan and the principal enemies of the Tutul Xiu. These Cocomes the French historians not only place at the head of the Itza insurrectionists who had evicted the Xiu from Chichen, but trace their pedigree from the kings of an ancient Laguna de Terminos 'city'! It is hardly necessary to say that there is

⁶ *In an Unknown Land*, 1924.

⁷ *The Civilization of the Mayas*, 1927.

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little or no basis for such pedigree-hunting, or that any account of New Empire existence from the time of the eviction of the Xiu until the middle of the tenth century is by nature almost purely speculative.

Then the Xius appear for a moment in the light again. Champoton (c. A.D. 950) is abandoned. The Xius are driven out, and, breaking into almost voluble record, the *Books of Chilán Balam* tell how the 'Itzas' (i.e. Xius) wandered the forests, homeless, living upon leaves and roots. Some catastrophe had smitten the western sea-board of Yucatan.

Its nature MM. Genet and Chelbatz connect with a great Toltec invasion of the peninsula under the leadership of the Mexican hero, Topiltzin Axcitl Quetzalcohuatl, whom the Maya were to remember as either the god Kukulcan or the bringer of his worship. In the acceptance of this Quetzalcohuatl as an historical personage, MM. Genet and Chelbatz follow Landa, who is responsible for recording the Yucatecan tradition. Mr Thompson also believes Kukulcan may have been the leader of a culture-invasion. To Dr Brinton and the orthodox Americanists generally Quetzalcohuatl-Kukulcan, like the Toltecs themselves, remained a 'euhemerized sun-myth'.⁸ Captain Joyce believes the 'bird-snake' of the Old Empire sculptures to have been a symbol of Kukulcan, and, accepting him as a personification of natural forces, considers him an Old Empire god.

Consideration of events in the Mexican Valley at this time may provide some means of escape for this confusion of gods and heroes. By the middle of the tenth century at least it appears probable that the power of the Toltecs, the great Xibalban-inspired 'Builders' who possibly originated in the Mississippi valley, had been definitely broken by an incursion of barbaric tribes into Mexico. Tula or Tollan, the legendary Toltec capital, was overthrown and its last king, Huemac, murdered.

Side by side with this tradition of the Mexican Valley there survived a curiously complementary one telling how, at the time of the fall of Tollan, the great culture-bringer Quetzalcohuatl, in flight before the barbarians, journeyed down to the sea and took ship into the east—to return, in the Aztec imagination six hundred years later, as Cortes.

This Quetzalcohuatl MM. Genet and Chelbatz, as has been said, consider an historical personage—an opinion with which the present writer is tentatively in agreement—and make him, not a gentle reformer,

⁸ *The Maya Chronicles*, 1886.

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but the leader of the defeated Toltec army meditating a settlement in Maya country. But, considering the subsequent influence of the Kukulcan worship which it seems likely he carried into Yucatan, the matter requires some further elucidation.

In spite of there seeming to be little warrant for the contention of the 'diffusionists'⁹ that the first American semi-civilization owed its inspiration to Asia, it is probable that, in the centuries following the fall of Xibalba, Chinese or Cambodian cultural influences played with considerable strength on the Mexican Pacific coast and the art and ethic of the Toltec tribes. This is, of course, denied by most authorities, though Mr Thompson hints at it as a possibility in his paper on 'Central America and the Children of the Sun'.¹⁰ The figure of Quetzalcohuatl suggests as many affinities to that of the Buddha as do the atlantean sculptures of the Toltec palaces to those of the Cambodian, and it is possible that the coming of his legend to Central America considerably antedated the adventurings of the Toltec hero who may later have borne his name. In spite of the usual sanguinary rites associated with his worship he seems to stand as a definitely alien god in the Central American pantheons.

The Kukulcan of Landa, therefore ('Kukulcan' is a literal translation into Maya of the Nahuatl word 'Quetzalcohuatl') may have been both a hero with the name of a god and, in the spirit of the early Mohammedans, a missionary of that god. MM. Genet and Chelbatz, following Las Casas in this particular, land him after his sea-voyage across a neck of the Gulf of Mexico at Xicalanco—certainly the region towards which Toltec refugee tribes appear to have congregated in those years. Thereafter their acceptance of the literal truth of the legends collected by Las Casas and Nunez de la Vega, flatly refuted as those legends are by the evidence obtained from modern archaeological spade-work in the Usamacinta region, can be no longer followed. For they lead the Toltec general Quetzalcohuatl to the conquest of the cities of the Usamacinta basin and the founding of Palenque—Palenque, which, according to any modern interpretation of Old Empire chronology, had been abandoned some five hundred years, and more probably some eight hundred!

Assuming Landa's Quetzalcohuatl-Kukulcan to have had the human character credited to him, however, and associating him with the

⁹ G. Elliot Smith, *Human History*, 1930.

¹⁰ ANTIQUITY, 1928, II, 161-7.

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undoubted eruption of Toltec influences into Yucatan, it is possible that the Xiu eviction from Champoton in c. A.D. 950 may have been connected with the landing of the invaders. The Nahua Napoleon may have come by sea and for the first time in history Nahua and New Empire Maya faced each other.

Yucatan, as we have seen, was probably fairly unified under the Itzas at Chichen, except for such pockets of independence as the Xiu-garrisoned seaport of Champoton. But neither Xiu nor Itza would have been capable of offering effective resistance to the invader, for it seems certain that neither the bow nor the spear-thrower was known to the Maya. Minus those weapons the Itza levies were probably easily out-classed and dispersed. Toltec bow and spear-thrower may have proved as demoralising as did the Prussian needle-gun in the war of 1871. Freely interpreting Landa, it seems that the Toltec army marched through the country, captured Chichen Itza, and laid the surrounding Maya under tribute.

Quetzalcohuatl-Kukulcan commenced to prove himself a statesman as well as a soldier. Abandoning Chichen Itza he had Mayapan built as a kind of federal capital. This was in A.D. 989, according to the independent account of Herrera.¹¹ A year later Uxmal was founded a score or so of miles south of Mayapan, and, in conjunction with Mayapan itself, Itzamal, and Chichen, formed the new Yucatecan Federation or League.

This brings us again to the record of the Xiu chronicles. According to one version of these, the Tutul Xiu, c. 990, 're-established Chichen Itza'. According to another Ahzuitok Tutul Xiu, the Xiu Moses who brought to a close the many wanderings of his tribe, founded Uxmal in 990. The latter happening, coinciding with the Kukulcan legend and the fact that Uxmal had been for centuries before the Spanish Conquest regarded as an exclusively Xiu city, is the more probable. Quetzalcohuatl-Kukulcan may have deliberately invited the straying Xiu tribe to settle in the region of Uxmal in order to counterweigh the power and pretensions of the Itza.

For some years he himself appears to have ruled the League from Mayapan. Then he disappeared from the scene, probably in company with the greater part of his Toltecs, and the Itza Cocome family ruled in Mayapan as senior members of the League.

¹¹ *Historia general de los hechos de los Castellanos en las Islas i tierra firme del mar oceano*. 8 decads. 1601, 1615.

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So far the materials for the filling in of this outline have been almost entirely written or traditional. But the League period is recognized by all archaeologists as marking a definite florescence of New Empire art. The great buildings of the Casa Colorada and the Caracol at Chichen are usually assigned to it, as are the principal architectural achievements of Uxmal, Labna, Kabah, Hochob, Chacmultun. Façade decoration comes into its own again, though now in the form of intricate formal mask panels. Decorative stone lattice work appears. The vertical roof structure becomes common.

It is impossible that this New Empire Renaissance came into being except through outside influences. But recognition of this fact is not yet by any means general. The painstaking investigator of sites and ruins is apparently but seldom acquainted with the mass of Yucatecan tradition and legend collated by the Spanish fathers. Unless the Kukulcan legend is, for the time being, accepted as at least partially based on historic events, the causes of the Renaissance might well be relegated to the benevolent urgings of the Yucatecan gods alone. Captain Joyce and Mr Thompson do not admit Toltec cultural influences in Yucatan until *after* the collapse of the League, and then in the form of diffusion from Toltec-garrisoned Chichen.

But the serpent columns and characteristically Nahuatl ball courts of Uxmal and other cities are almost certainly League work. Open-work decoration on the top of temple walls is not only characteristic of Mexican architecture, but possibly Asiatic in origin. Though atlantean supports, flat roofs, and low relief sculpture showing the processional groupings of warriors may have come later, the phallic picotes of Uxmal and the phallic columns and ornaments of Labna and Chacmultun cannot well be ascribed to any other origin than the Mexican tribes, or any other period than that covered by the duration of the League of Mayapan.

Spite the frequent representations of the 'snake-bird' there are no very plausible evidences that the god Kukulcan was known to the Old Empire Maya, and, on Landa's authority, his worship in Yucatan now became general—a strange avatar indeed for Sakya Muni, if the origin of the Toltec deity was Asiatic. Probably human sacrifice as a seasonal rite of importance was also imported by the Maya from Mexico in the League years. There is a carving at Piedras Negras, in the heart of the Old Empire territory, which appears to portray a victim on the sacrificial altar, but this unrelated instance does not greatly modify the apparently general belief held in Yucatan that human sacrifice came with the 'strangers'.

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Ceremonial cannibalism, the almost inevitable concomitant of human sacrifice, did not, it is possible, become common until after the wars of the League and the second incursion of a Toltec host. Mr Payne¹² showed with considerable plausibility that in a culture which reaches to town-building and town-dwelling in a country devoid of large domestic animals the development of some such conditions as those which prevailed among the Nahua, where slaves were regularly kept in pens and fattened on maize for the table, was to be expected. But there is no record of such an appalling custom in Yucatan.

For two hundred years, until about A.D. 1200, the League of Mayapan endured, probably held together in the vibrant equilibrium of the cities' jealousies. Then comes in the *Xiu Books of Chilan Balam* record of a series of events in which the Xiu themselves appear to have played at first a neutral part. Hunac Ceel, the Cocome ruler of Mayapan, attacked and overthrew the rule of Chac Xib Chac, the 'king' of Chichen Itza. The League fell apart. In the first uncertain course of the conflict Hunac Ceel called in an army of mercenaries from Tabasco. These, after the defeat of Chac Xib Chac, he established in Chichen as a permanent Toltec garrison.

To this event is generally ascribed the Toltec cultural evidences throughout the peninsula, and it is indeed possible that a few new motifs in architectural decoration and in sculpture may have been brought to Yucatan by these mercenaries, practised by them in their stronghold of Chichen, and copied by the surrounding Maya cities. But such influences, except perhaps in the domain of religious rite, were probably slight enough. By another hundred years these Nahua appear to have been absorbed in the surrounding Maya populace. For, at the end of that space of time, *c.* 1300, the Xiu abandoned their neutrality, appear to have placed themselves at the head of the revolt of the Itza nobles, and 'Mayapan was destroyed'. There is no mention of the Cocomes receiving aid from their Toltec garrison in Chichen.

Probably it was at this time that the gradual splitting up of the peninsula into the states which the Spaniards found began. The Cocomes of Mayapan fled to Kimpech (Campeche), apparently a settlement also ruled by Cocomes. The Xiu, after an unsuccessful endeavour to induce the Itza nobles to accept their overlordship, retired to Uxmal again. Mani, the state which they built up around that city and their older capital, remained the dominant power in Central Yucatan.

¹² *History of the New World called America*, 1899.

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Meantime it is probable that culture was already on the decline throughout the length and breadth of the New Empire. Mayapan, in which only the Cocomes power appears to have been destroyed, was held by now this adventurer, now that. The Cocomes plotted in Kimpech. Elaboration of temple rites—the Maya temple now dominated by the hybrid Quetzalcohuatl deity—went steadily on. Cozumel Island, probably an independent 'state', had acquired through all Central America a reputation for sanctity, and, as Bernal Diaz was later to record, pilgrims from remote, un-Maya lands came to worship at the island shrines and invoke the island oracles. The great pilgrim highway between Chichen and the sea-coast opposite Cozumel was probably built at this period.

Then, c. 1350, an obscure version of the *Books of Chilán Balam* record that 'cannibals came'. This probably refers to a descent of Caribs on the eastern shores, in the state of Ekab and south of Ekab. They may have seized Tuluuum, and been responsible for the later growth of the hybrid 'Tuluuum culture' which left the sea-coast of eastern Yucatan strewn with dwarfish temples. There can be little doubt but that it was among the descendants of these cannibals, hardly yet 'Mayaized', that Valdivia and his companions, the first Europeans to come in contact with the New Empire, were wrecked nearly 150 years later.

The history of that 150 years, the closing phase in the adventure of the great lost expedition of civilization which had appeared so mysteriously in the Chiapas forests some 1700 years before, is in portions still obscure enough. Early in the fifteenth century the Cocomes, backed by an army of barbarian Tenochcas and Xicalanques lent them by Mexico, returned to Mayapan and ruled there for a short time. This third army of mercenaries to appear in Yucatan was not even Toltec in name; the Toltecs were by then legendary figures in Mexican memory. It seems to have been composed of Nahuas at a low stage of culture, and probably, terrorism apart, they exerted little or no effect on the life of the Maya.

They constituted Yucatan's last group of invaders, and their's was the last eddy of the many culture-waves which had flowed across the history of the New Empire. The subsequent course of that history is accordingly outside the province of this sketch. How the Itza again revolted, again invoked the aid of the Xius of Mani, and again evicted the Cocomes from Mayapan; how the last vestige of political coherence vanished from the peninsula, and a host of small states (see map) arose;

THE MAYA NEW EMPIRE IN YUCATAN

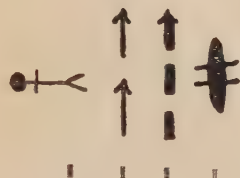
Probable routes

Tutul X'iu, c. A.D. 163-420

Great Descent, c. A.D. 400

Little Descent, c. A.D. 500

Quetzalcohuatl invasion c. A.D. 950



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how the Mexican mercenaries forced their way to the northeastern coast and established themselves in the district of Kanul, there to retain their reputation for ferocity until the coming of the Spaniards ; how a remnant of the Mayapan Cocomes established themselves in Tibullon and engaged in endless warfare with the surrounding Itza and their ancient enemies, the Tutul Xiu of Mani ; how first a great storm laid waste all Yucatan, how on its heels followed a pestilence which wiped out half the population, how one hundred and fifty thousand Maya perished in a culminating civil war—of these happenings Landa and other historians already cited tell in detail.

One morning, the priests of Cozumel, tending their temple altars looked up and saw far out to sea the passing of monstrous sea-houses gleaming in the sun.

It was the year 1493 : those were the ships of the Portuguese.

ILLUSTRATIONS

The accompanying plates illustrate the three principal phases of art and architecture in the New Empire of the Maya in Yucatan :—

- I. The Akat 'Cib at Chichen Itza. An example of pure New Empire architecture (A.D. 600-800), though possibly showing Early Toltec influences.
- II. The inner doorway of the great ball court (temple A) at Chichen Itza. An example of Early Toltec architecture and decoration. (*c.* A.D. 1000).
- III. Doorway in the eastern wing of the Casa de Monjas at Chichen Itza. An example of Late Toltec sculpture in the New Empire. (*c.* A.D. 1250).

Air-Photography in Northern Ireland

by D. A. CHART

ON the suggestion of Rev. L. P. Murray, and influenced by the discoveries made at Stonehenge and elsewhere by means of air-photography, the Ancient Monuments Advisory Committee for Northern Ireland, at a meeting held 27 April 1927, agreed to pursue similar investigations in the Province. The Ministry of Finance, which in regard to Ancient Monuments corresponds to H.M. Office of Works in England, gave its support and asked the Air Ministry for its co-operation. This was readily accorded, and 502 Ulster (Bombing) Squadron of the Royal Air Force stationed at Aldergrove, co. Antrim, was instructed to give assistance, so far as was consistent with its ordinary duties. Valuable help was given by Wing Commander A. Claud Wright and the Squadron under his command, and the results have been decidedly interesting.

At first attention was directed rather to the elucidation of various points concerned with the leading monuments of the country, most of which are in the Ministry's care—for instance the extent and plan of vanished buildings of Devenish, Inch and other abbeys, and the sites of suspected Celtic churches near the Round Towers at Antrim and at Maghera (co. Down). No very striking discovery was made in the course of these investigations, but tentative photographs of another type of monument, the great ring fort at Navan, co. Armagh, showed that excellent results were likely to be achieved by the study of the earthworks which are so numerous in Northern Ireland. The R.A.F. officers themselves endorsed this view, and pointed out that the vicinity of their own aerodrome was extremely rich in such remains. Some of these which were visible from the air were not marked on the Ordnance Survey as antiquities, or even as natural features. In other cases air-photography revealed unmistakable earthwork sites in places where neither written record nor popular tradition had reported their existence. It was thought proper, accordingly, to concentrate on this side of the work, and particularly to devote attention to three large constructions of this kind, which have long provided problems for archaeologists.

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The first place selected was the fort at Navan, already mentioned, which is the ancient Emania, and is believed to have been the palace of the Kings of Ulster from about 300 B.C. to A.D. 330, celebrated in the romantic stories of Deirdre, Cuchullin, and the Red Branch Knights. It was hoped that the sites of buildings might be traced within the great round enclosure, other than the high mound and small rath already known to exist; also that outworks and tracks might be found, as at Stonehenge. A photographic mosaic was made of the ring and its vicinity, the central portion of which is shown on plate II. Although the details are very clear, no striking addition to knowledge has so far been made in the central part. About 550 yards to the eastward and beside the main road to Armagh the mosaic shows a dark circular marking (not included in the plate). This, on examination, was found to be a low, circular, green mound in a field, composed, according to the testimony of the owner, of small stones, in contrast to the rest of the field which is marshy. It is about 80 yards in diameter, and its highest point is 2 to 3 feet above the general level. Its vegetation on the day of inspection appeared to be shorter and brighter of tint than the rushy growths around. The owner also stated that a brook which runs beside the mound had, within his recollection, encircled it. This may have been some kind of outwork or cattle enclosure connected with the main fort. A less definite smaller marking was seen close to this mound but a little to the north. The mosaic shows other details of a rather indefinite type, the most notable being a dark circle just outside and to the west of the great ring beside letter F in plate II, but nothing corresponding to this could be traced on the ground. Anticipations that tracks might be found leading towards Armagh and the old Ulster frontier near Dundalk were not realized. These tracks may, however, survive in the form of laneways.

In the south of county Armagh the large, but little known and hitherto rather indefinite entrenchment at the Dorsey, lying on the main road between Armagh and Dundalk, was very clearly photographed from the air, and a mosaic constructed, the centre of which is shown as plate I. The picture gives a far clearer conception of this striking work than has yet been obtained. It is a system of ramparts and trenches lying across one of the entrances into Ulster from the south. The name of the locality, 'Dorsey', indicates that it was regarded by the ancient Irish as a gate. Although the entrenchment is spread over a tract of land about 1800 yards long by from 350 to 600 yards wide, there are breaks in its continuity. Supposing it to have been an enclosed

fortification, its perimeter would have been enormous—at least three miles—and several thousand men would have been required for its defence. Furthermore the supposed enclosure is cut in two by a large bog and is pierced by several streams. Although its situation and construction are, generally speaking, advantageous from the military point of view, it has no very regular plan, but wanders over hill and dale in a manner which suggests a boundary or a barrier rather than a stronghold. Various questions arose :—

(1) Was it a continuous enclosure or merely two parallel lines of defence of which the first or southward was much stronger than that to the north ;

(2) Was it part of a travelling earthwork, and, if so, could it be linked up with any other similar constructions on either side.

Air-photography has revealed with some certainty and completeness that it was definitely an enclosure and has thrown new light on the second question. (See plate 1).

The line of the entrenchment is shown on Mr T.F.O. Ripplingham's tracing (fig. 1) and has been confirmed on the ground throughout its length. By a fortunate chance Flying Officer Ellison, who had taken many of the photographs, was on leave in Armagh and was able to cooperate in this part of the work. The continuity of the enclosure is shown by the existence everywhere of vestiges perceptible to the aerial camera, except in situations where the construction of an earthen barrier was extremely difficult, as in bog or rocky ground. But even here the indications, though not apparent in the air-photograph, were not completely absent, for the ground party, at the southwestern corner where the entrenchment approached a bog, was fortunate enough to find six inches under the surface a large oaken timber shaped like a pile and blackened with long submersion in the swampy soil. Such timbers have often been found in similar positions elsewhere in the entrenchment, and it is a legitimate deduction that the earthwork crossed swampy ground by some kind of stockade carried on piles. Similarly, on rocky ground thinly covered with earth, as in the middle of the picture (see fig. 1), the abundance of loose weathered stones suggests the erection of defences of dry piled stone in lieu of an earthwork. The original defences in such cases, except where they survive as field boundaries, have probably been carried away piecemeal as building material.

The air-photographs are inconclusive as regards the connexion of the Dorsey with other travelling earthworks. The appearances in the bog to the west of the main entrenchment were either indiscernible

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on the ground or resolved themselves into natural outcrop. Turf was actually being cut in this bog at the time of inspection but the cutters, on being asked whether they had found any large oak timbers similar to those found at the southwestern angle, replied that they had found no timber but the usual willow. To the east of the main entrenchment a curious spur or flanker appears to run down to the river (marked as 'low mound leading to swamp' in fig. 1), but on inspection no evidence was found that it continued across the stream, the photographic appearance on that side being due to the overflow from a well.

The general trend of ground verification will be sufficiently indicated by a comparison of plate I with figure 1.

Although the purpose of this article is to relate what has been found rather than to theorize from the observed facts, a single observation may be permitted : namely, that the entrenchment was intended to block an opening. It has on its eastern flank swampy slopes falling to a brook, on the far side of which is scrubby and difficult foothill country rising to the mountain mass of Slieve Gullion. On its southward side the ramparts are extraordinarily high, attaining to the dimensions of a railway embankment and accompanied by very deep trenches, the bottom of the trench often being 20 feet below the rampart top. On this side, too, swampy ground and the course of a small stream were utilized as part of the defence. The western flank was guarded by a bog. On the northern side the defences are less elaborate and not so well-preserved as on the southern. The present main road from Dublin to Armagh and the northwest passes through the entrenchment. The general conclusion appears to be that this was a frontier stronghold of a most elaborate and extensive kind ; perhaps also a place of refuge for the surrounding people and their herds ; and that the foe against whom it was erected was expected to come from the south. History relates that the kingdom, having its capital at Navan near Armagh, was destroyed by invaders from the south about the year A.D. 330.

At the same time the long travelling earthwork between the counties of Armagh and Down, known as the Dane's Cast, was flown over for the whole of its visible length, and its course noted from the air. Photographs of sections have been taken, of which plate III is a specimen, showing how clearly the course of the Cast is visible to the eye of the camera. The problems connected with this Cast, of which a solution was desired, were :—

- (1) its termination at the northern and southern ends ;
- (2) the gap in the middle in the neighbourhood of Bessbrook.

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As regards (1), the R.A.F. officers could find no continuation beyond Scarva, but remarked on the number and strength of the earthworks in that neighbourhood, at what appeared to be the northward termination of the Cast. Here, for instance, still stand the great round forts of Lisnagade and Lisnavaragh, the larger of which is some 140 yards in diameter, both being encircled by successive deep ring trenches. At its southern end they reported that aerial indications showed that the Cast turned eastward towards the sea in the neighbourhood of Meigh, and ended in country that was probably difficult in the past. The gap in the middle at Bessbrook is a country of deep valleys, and is also remarkable for abundance of earthworks. The air-photographs of this district have added a considerable length to the identified remains of this earthwork.

The Squadron furthermore reported all visible appearances having the form of earthworks, seen from the air in the immediate neighbourhood of their aerodrome. These are fairly numerous and many have been investigated on the ground. At the same time the Squadron, at the request of the Ministry, photographed some of the more striking appearances, which they observed either there or generally on their flights over the country.

The site of a very large triple or quadruple ring earthwork at Aughnamullan, about 3 miles ENE of Crumlin, co. Antrim, about 100 yards in diameter, is shown in plate iv. This site is a level rushy field and there seems to be no surface indication. In plate v an equilateral triangle of circular earthwork sites at Ballyginniff, 3 miles west of Aldergrove aerodrome, close to the eastern, or Antrim, shore of Lough Neagh, is shown. None of these is marked on the Ordnance Survey map, though the existence of one might be inferred from a semicircular nick in the field boundary embodying part of its arc. The sites are roughly 200 ft. in diameter, are distant 400 yards from each other and are on level marshy ground. The fort at the nick in the centre has the remains of an inner and outer rampart embodied in the field boundary. That near the top edge has part of its trench in the field boundary. That near the right hand edge of the picture is only shown by a slight mounding of the surface.

The study of the earthworks, as revealed from the air, confirms the view that, although all are called 'forts' colloquially, many of them could have had no military purpose. They are far too numerous, and cases occur of overlapping, of pairs side by side, and of situations in deep ravines which could be commanded from the surrounding hillsides.

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Overlapping at Glenloughan, near Scarva, co. Down, is seen in plate vi. This was examined on the ground by the late Mr A. Robinson, formerly Commissioner of the Office of Works, Dublin, who reported that there can be no question as to the pair overlapping. The rath of smaller circumference, which is the earlier, has been overlapped by the larger to the extent of from 40 to 45 feet. They are but slightly raised above the natural surface of the ground.

A triple-ringed fort in a swampy valley between steeply sloping hills is shown in plate vii. It was taken in the early days of the enquiry when oblique photographs with a small field of view were used, and, not including a house, road, or field of irregular shape, has hitherto proved impossible to identify. It is known to be one of a series illustrating earthworks between Dromore, co. Down, and Magheralin, but neither local enquiry nor close study of the Ordnance Maps of the district have yet been able to disclose its position. Any information would be welcome.

The French Excavations at Minet el Beida and Ras Shamra in Syria

by F. A. SCHAEFFER*

Leader of the Archaeological Expedition at Ras Shamra

Curator of the Prehistoric and Gallo-Roman Museum of Strasbourg

THE excavations at Minet el Beida and Ras Shamra, begun in 1929 and continued in 1930,¹ were undertaken at the suggestion of M. René Dussaud, Member of the Institute and Conservator at the Louvre. The natural harbour of Minet el Beida (the White Bay)² lies facing Cyprus; and it was this fact which gave M. Dussaud³ the idea of a Mycenaean colony from Cyprus importing thither the copper which had to be disembarked for transport to the interior and to Mesopotamia. This theory was supported by the fact that 1000 metres from the bay is a huge tell (mound), called by the natives Ras Shamra (Cape Samphire), which might well hide the ruins of this assumed sea-port.

In 1928 there came the accidental discovery of a burial-vault at Minet el Beida, of corbelled construction and containing Mycenaean and Cypriote pottery dating from the 13th century B.C. This was the first confirmation of the theories about the antiquity of Minet el Beida and Ras Shamra. The Académie des Inscriptions et Belles-Lettres, at M. Dussaud's suggestion, sent out an expedition to locate the ancient harbour, town and cemeteries of Minet el Beida. The direction was entrusted to the present writer, who chose as his assistant M. Chenet, well known on account of his excavations of the Roman kilns and glass-factories of the Argonne.

Our excavations near the bay have revealed an important cemetery containing several large rectangular tombs with corbelled vaults,

* Translated by the EDITOR.

¹ The first report, covering the season of 1929, was published in *Syria*, 1929, x, 285-310. That of the season of 1930 will appear in the same journal early in 1931.

² It was called Leucos Limen by the Greeks, and lies about 15 kilometres north of Latikia, in the State of the Alaouites, Northern Syria.

³ See his *Topographie historique de la Syrie antique et médiévale*, Paris, 1927, p. 417.

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approached through a short vestibule or forecourt with stairway, the whole carefully built of well worked stone blocks. One of these tombs (no. 3) was hidden under a rather important building, to judge from the columns with attached walling which are all that remain of it today and which are not easy to explain. Directly communicating with the tombs were other still more important buildings, one of which was completely cleared this year; it contained thirteen halls, rooms and passages, without counting the upper story whose staircase with its landing are preserved. This building is generously provided with wells and water-channels, all of which have been rendered useless by artificial filling or concrete covers. Upon and beside these wells, along the passages, in the rooms and at the foot of nearly every column, were placed votive offerings of painted Mycenaean and Cypriote vessels, ordinary pots and objects of bronze, silver and gold, such as pins, lamps, knives and daggers. They prove that the building cannot have served a merely utilitarian purpose. Perhaps it may be regarded as one of those houses of the dead like those which some Egyptian pharaohs had built beside their funeral vaults. The comparison is strengthened by the fact that the civilization of Ras Shamra, as we shall see presently, borrowed much from that of the Nile Valley.

A still more important series of discoveries awaited us to the north of the tombs, towards the sea. Here, at a depth of between 0 m. 50 and 1 m. 50, near a roughly-built room, lay about 80 deposits consisting of Cypriote, Mycenaean and local pottery (fig. 7), bronze implements and weapons, stone weights conforming in part to the Egyptian mina of 437 grammes, shells or just plain pebbles from the shore close by. There were also curious stone tablets, pierced steles and stone phalli, large and very life-like. The richest deposit, near the centre of the group, contained two horus-hawks in the Egyptian style; one of them, of bronze (fig. 2) bore the double crown of Lower and Upper Egypt, the other, of bronze and gold (fig. 4), held the Uraeus between its feet. Not far off lay a statuette representing a seated deity (fig. 3) with eyes of silver and enamel, giving a benediction with its outstretched hand, according to the manner of certain Syrian gods. The chief object of the group is the statuette (25 cm. high) of the Syrian god (fig. 5) Reshef (sometimes identified with Baal); it is of silvered bronze, and the head and high coiffure are formed of a leaf of gold. The god is represented standing; formerly in his right hand he brandished a thunderbolt or battle-axe, while in his left he held a sceptre or spear, as he appears in other representations from Ras Shamra.

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Not far from the majestic Reshef lay his colleague, the goddess Astarte with the Hathor coiffure, holding the lotus in her hands. Her fair, slender form is artistically wrought in gold leaf. A necklace of quartz and carnelian beads completed the hoard.

We must imagine that this hoard and those near it had been buried in honour of some great persons, probably the kings of the adjacent city of Ras Shamra, laid to rest in the vaults we found close by.

The first vault (fig. 8), whose covering-slabs were almost level with the surface, had been plundered by natives. In the debris from it was recovered Cypriote and Mycenaean pottery of the 13th century, an engraved spatula and a bronze bracelet.

Vault no. 2 (fig. 9) had served as a quarry since ancient times. The three upper courses of the fine corbelled vault and that of the stairway had been carried away; the vault itself, the votive-niches in the walls, and the little recess alongside had all been robbed. Arrowheads, bronze spatulae and some pottery found on the floor of the tomb show that like the rest it belongs to the late Mycenaean period, and may be assigned to the 13th century B.C.⁴

The third vault (fig. 10), which is almost intact, was also visited by robbers in bygone times. They entered through a hole in the roof, carried off whatever valuable metal objects there may have been in the tomb, and blocked up the hole again after leaving. Happily their visit was clandestine, and in spite of the disorder they left behind them part of the grave-goods, which were very sumptuous, remained undisturbed and they did not even enter the passage. It was by this way through the entrance of the tomb that we went in, collecting the native offerings of pottery which were placed in the corner of each step, leaving the middle of the staircase free. They consisted of Canaanite terracotta lamps, small conical vases, a fine Mycenaean crater with overlapping ornament and a magnificent intact Egyptian two-handled vase of alabaster (fig. 11). On the threshold of the fine door of the vault lay a well preserved human skull; it is difficult to say whether it belonged to an attendant who was sacrificed and buried at the entrance of his master's tomb, or whether it had been thrown there by the robbers when they broke into the vault.

The skeletons—at least four in number—had suffered at the hands of the robbers, the bones were scattered and the skulls broken. But

⁴ The vault is 4 metres long and 3 metres wide; its present height is 2 metres; the stairway is 4 metres long and 1 m. 90 wide.

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in their haste the robbers failed to search thoroughly the corners of the vault, where they missed finding rings and beads of gold or of silver and iron—then regarded as a precious metal—haematite cylinder-seals, faience and alabaster vases and, above all, oval ivory boxes, one of which has a splendidly carved lid. It represents the Goddess of Fertility (the 'potnia theron'), seated on a throne flanked by two he-goats, and it is indisputably the finest Mycenaean ivory actually known⁵ (fig. 12). The pottery dates this vault too to the late Mycenaean (13th century B.C.).

Our excavations on the northern projection of the mound of Ras Shamra brought to light a large temple with two rectangular courts joined together and enclosed by thick walls. We found fragments of life-size granite statues of gods which had once stood on raised stone pedestals in the court; their style is that of the end of the 18th dynasty (1580-1350). From a stele dedicated by Mami, royal clerk of the Treasury, to Baal of Sapouna, we get the ancient name of the town. This large temple of Egyptian character reveals the strong influence exercised by the pharaohs or even their political control of the land of Sapouna in the 14th and 13th centuries B.C. Beside it we found several shrines of lesser importance which appear to have been devoted to the cult of local divinities, two of whose images we found. One, female, was mutilated; the other, male, was fortunately intact. It represents a god in a standing posture, with an Egyptian coiffure of ostrich-plumes; on the forehead grows a spiral horn; in the left hand is a spear, and in the right the *hiq*—a kind of sceptre presented by the Egyptians to foreign rulers. The god is clothed simply in a loin-cloth kept in position by a belt with a big-pommelled dagger; he wears leather-thonged sandals with toes pointed after the Hittite style.

Beside the temple, as at Nippur, stood a school or seminary where the young priests must have learnt Sumerian—the Latin of those times—and the other languages used at Sapouna; where also they learnt the difficult profession of a scribe. We found their exercises in cuneiform writing, their lists of Sumerian and Babylonian (Accadian) words, as well as regular bilingual dictionaries intended to assist them in reading and composing religious and diplomatic documents. A letter quite in the style of the well-known Amarna correspondence refers to

⁵ See R. Dussaud et F. A. Schaeffer, 'Ivoires d'époque mycénienne trouvés dans la nécropole de Ras Shamra (Syrie)', *Gazette des Beaux Arts*, 1930.

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alterations of the frontier between three hitherto unknown Syrian towns—Halbini, Hazilu and Panashtai.

But what gives outstanding importance to the cuneiform tablets found at Ras Shamra is the fact that most of them contain a script that is wholly unknown and which had already become alphabetic (fig. 13). Professor Bauer of Halle and Father Dhorme of the École Biblique at Jerusalem recognized a Semitic language in these documents; and they have put forward a preliminary explanation of it. The complete deciphering and first translation of the new writing are the work of M. Charles Virolleaud, the learned Assyriologist, to whom I entrusted the publication of the documents of Ras Shamra.⁶ He has just made a communication to the Académie des Inscriptions et Belles-Lettres concerning these texts, a portion of which is composed in almost pure Phoenician and whose contents are of capital importance for the religious history of the East. The principal document is a kind of epic poem in which the chief character is called Taphon, and which consists, in its present state, of nearly 800 lines. Chief among the divinities are the goddess Anat and the god Alein, son of Baal; but there are more than 20 others, among whom are Asharat, Astarte, Dagon, El-Hokmot the god of wisdom, and Din-el the Justice of God. The bilingual glossary contains a very complete list of words and some Sumerian phrases; but instead of the Babylonian which is usually employed in these glossaries to translate Sumerian, the glossary of Ras Shamra contains a language totally unknown up to the present. M. Thureau Dangin, the distinguished Assyriologist, will shortly make known its significance. The number of documents we found this year gives ground for supposing that the school of scribes possessed an important library, containing amongst other things large tablets of three or four columns each (fig. 14), which encourage us to expect a fine harvest of new historical knowledge.

Below the floor of the library and all around it we made numerous discoveries:—silver and bronze cups, copper ingots, a vase full of silver objects, and above all a splendid collection of 74 bronze implements and weapons in an exceptionally fine state of preservation (fig. 15). It consists of 4 swords, 2 daggers, 25 flat axes, 11 spearheads, 3 arrowheads, 6 chisels, 4 sickles, a fine tripod ornamented with pomegranate-

⁶Ch. Virolleaud, 'Les inscriptions cunéiformes de Ras Shamra', *Syria*, 1929, x, 304. After him, Hans Bauer, *Die Entzifferung der Keilschrifttafeln von Ras Shamra*, Halle, 1930. P. Dhorme, *Revue Biblique*, 1930.

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flowers (fig. 1). The most valuable objects are 5 large implements of unknown use and 9 socketed adzes (*herminettes*), five of which have cuneiform inscriptions punched upon them, probably dedications (fig. 6). The presence of two cakes of metal and the fact that several of the weapons are unfinished show that the workshop where they were made cannot have been far distant.

At a lower level, clearly separated from the one above it, which belongs to the 14th and 13th centuries, we brought to light a cemetery of the 17th and 16th centuries completely free from Mycenaean influence. The pottery belongs to native Canaanite types, with blackish or reddish slip, unpainted.

Penetrating to a yet lower depth, at 7 metres down we found crude brick walls belonging to buildings that stood here long before the existence of the overlying cemetery; these must go back to the beginning of the 2nd or even to the 3rd millennium. The investigation of them must necessarily be postponed until the two upper levels have been cleared.

The excavations at Minet el Beida and Ras Shamra will be continued next spring. But the important results already obtained and the character of the objects unearthed makes it plain that the old sea-port which the Egyptians called Sapouna had in the 14th and 13th centuries attained a position of pre-eminence. It undoubtedly derived its importance from the Cypriote copper-trade, whose entrepôt it was for intercourse with Syria, Mesopotamia and Asia Minor. At the same time there were exported thence to the Aegean the Asiatic goods brought by caravans along the many routes converging there upon the sea coast. Its diplomatic and commercial relations, therefore, were altogether of an international character. Proof of this is found in the polyglot population, including priests who understood three forms of cuneiform writing, one of them—that which was the most fully perfected and already alphabetic—being their own invention. To these languages must be added Egyptian and Hittite, bringing the number of those spoken at Sapouna to a total of five.

In the pantheon of this little state we find side by side both native Syrian divinities and those of Mesopotamia and Egypt; so that in religion too a thoroughly international atmosphere obtained.

This finds its fullest expression in art. In the ivories, the statuettes of bronze, silver and gold, in the pottery, even in the small objects and sculptures we can see, grafted on native artistic traditions, influences

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derived from Egypt, the Aegean, Mesopotamia and Asia Minor. To appreciate this fact, one has only to glance at the illustrations which accompany this article.

TRANSLATOR'S NOTE

Readers of ANTIQUITY will remember that the first brief news of the discovery of the new alphabetiform language was published in ANTIQUITY, 1928, II, 87-8, through the courtesy of Dr Virolleaud, then Director of Antiquities in Syria.

The Faiyum Depression*

by JOHN BALL

Director of Desert Surveys, Survey of Egypt

WITH the publication of Sir Hanbury Brown's *Fayoum and Lake Moeris* in 1892, it was widely believed that the problem of the situation and extent of the Lake Moeris of antiquity had been finally solved. Sir Hanbury Brown pointed out that the shore-lines of an ancient lake could be traced in the Faiyum at a level of about 22 metres above sea ; he concluded that this lake, which must have covered almost the whole of what is now the Faiyum province of Egypt, was the ancient Lake Moeris, and that the remarkable gravelly ridge known as the 'Idwa Bank was the remains of an artificial embankment which had served to reclaim from the lake a comparatively small area around the present town of Medinet-el-Faiyum. Sir Hanbury Brown's views received ready acceptance, because whilst satisfying all the modern levelling and other observations which had up to that time been made, they were also in tolerable accord with the account of Lake Moeris given by Herodotus and copied by subsequent classical writers. In particular, a lake at the 22-metre level could have served as a combined flood-escape and reservoir for the waters of the Nile, such as seems to be implied in Herodotus' description ; and the name of the twelfth-dynastic King Amenemhat the Third, the supposed constructor of the lake, has been extolled as that of a great pioneer of Nile-control,

* (1). RECENT WORK ON THE PROBLEM OF LAKE MOERIS. By Miss Gertrude Caton-Thompson and Miss E. W. Gardner. *Geographical Journal*, January 1929, pp. 20-60, with sketch-maps, a time-level graph, and other illustrations.

(2). PALAEOLITHIC MAN AND THE NILE-FAIYUM DIVIDE : a study of the Region during Pliocene and Pleistocene times. By K. S. Sandford and W. J. Arkell. *University of Chicago Press*, December 1929, pp. xv, 77, with 11 plates, 25 text-illustrations and a coloured map. 22s 6d.

We have also received the following paper which is not dealt with in the review here printed:—'The Pliocene and Pleistocene deposits of Wadi Qena and of the Nile Valley between Luxor and Assiut (Qau)'. By Kenneth Stuart Sandford *Quart. Journ. Geol. Soc.* 1929, LXXXV, 493-548, maps and plates.—EDITOR.

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whose beneficent achievement in the Faiyum might well be imitated by the irrigation engineers of our own day in the neighbouring depression of the Wadi Raiyan.

But Sir Hanbury Brown's conclusions have been completely upset by the recent archaeological and geological researches of Miss Caton-Thompson and Miss Gardner, which prove that the shore-lines of the 22-metre lake, regarded by Sir Hanbury Brown as being those of Lake Moeris, are really those of a much older (palaeolithic) lake, which had disappeared long before dynastic times, and that the 'Idwa Bank is of natural and not artificial origin. Within the area enclosed by the shore-lines of the 22-metre lake Miss Caton-Thompson and Miss Gardner discovered other shore-lines at successively lower levels, with neolithic and early dynastic settlements, the latest and lowest of which are situated on a well-defined beach nearly 25 metres lower than that of Sir Hanbury Brown's lake. As these neolithic and early dynastic settlements bear no signs of ever having been submerged, it follows that the historic Lake Moeris cannot have had anything like the extent, or have attained nearly so high a level, as Sir Hanbury Brown had concluded, but must have been merely the shrunken remnant of a later neolithic lake, whose level had fallen so low that there could not possibly have been any return flow from it to the Nile, and whose area had diminished till it occupied less than half of the Faiyum depression. Miss Caton-Thompson and Miss Gardner conclude that Herodotus was misinformed as to the size and function of the lake ; they suggest that what he saw was not Lake Moeris, but a series of basins irrigated by Nile water on the extensive slopes leading down to it, and that the traditional great engineering works of the twelfth dynasty may have comprised merely the improvement of the waterway from the Nile and the bringing under cultivation of the higher-lying ' plateau ' around the present Medinet-el-Faiyum.

Drs Sandford and Arkell describe the results of a careful geological and archaeological study of the eastern part of the Faiyum depression and the elevated desert-tract between it and the Nile Valley, which they carried out under the auspices of the Oriental Institute of Chicago University as part of a much larger programme of work, namely a prehistoric survey of the entire Valley of the Nile. The prehistory of the region is, of course, intimately bound up with its geology ; and in successive chapters the authors give us an account of the highly interesting conclusions to which their observations have led them

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concerning the changes that have taken place in the area from Oligocene times onwards. The Oligocene gravels covering the high plateau to the north of the Faiyum are considered to be the deltaic deposits of an ancient river, the Ur-Nil ; and since these deposits contain no igneous or metamorphic pebbles, it is inferred that the core of the Red Sea Hills was either not yet uncovered, or else not included in the basin of the ancient river. In the Miocene period the Ur-Nil settled into a definite bed, the land rose, and the river eroded a deep valley (without, however, cutting down to the present bed-rock level in Lower Egypt; this was only reached by further erosion at a much later date). The land then sank, and the valley was converted into a gulf, which gradually became filled with sediments during the Pliocene period ; the present gravel-hills of the Nile-Faiyum divide are regarded as representing old valleys which drained eastwards into the Nile in Pliocene times, while the present valleys were then occupied by intervening plateaux. In the transitional period between Pliocene and Pleistocene times a great change took place ; the present Nile began to erode its bed in the Pliocene sediments, and to form the dominant feature of the valley, bringing down gravels composed of igneous and metamorphic pebbles derived from the Red Sea Hills and spreading them far and wide over the terraces it had formed in the older sediments. The authors consider that the excavation of the Faiyum depression originated during this period, by the erosive action of a river-system of which no traces now remain but which drained into the Nile, probably through the Hawara channel. Coming now to Pleistocene times, when man seems to have first appeared in the region, Drs Sandford and Arkell discovered that the eastern half of the Nile-Faiyum divide is covered by an old Nile-bed of gravels containing a mixed assemblage of lower palaeolithic implements, ranging from the crudest Chellean to the finest Acheulian types, evidently derived from the breaking down of a succession of terraces. No trace of these older palaeolithic cultures was found in the Hawara channel, nor, with a possible single exception, within the Faiyum depression. Drainage from the Nile into the Faiyum through the Hawara channel appears to have first commenced in middle palaeolithic times, and is evidenced by terraces of gravels derived from the Nile, and containing Mousterian implements, which could be followed at falling levels through the channel and on into the Faiyum, where they are at a height of about 34 metres above sea. Of the late palaeolithic and neolithic periods no traces were found in the Nile Valley ; it is inferred that the relics of these periods have either been destroyed or

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else lie below the present alluvial level. Silts and gravels with Sebilian implements can, however be traced through the Hawara channel and on into the Faiyum, where they form lake-beaches about 28 metres above sea. Drs Sandford and Arkell agree with Miss Caton-Thompson and Miss Gardner as to the natural origin of the 'Idwa Bank, describing it as a storm-beach, and also as to the palaeolithic age of Sir Hanbury Brown's 22-metre lake, though they consider that it dates from the late rather than the middle division of that period because they found beaches with late palaeolithic implements at somewhat higher levels. In regard to the renewed erosion of the Faiyum depression between palaeolithic and neolithic times, which Miss Caton-Thompson and Miss Gardner ascribe to wind-action during a period of desiccation, Drs Sandford and Arkell consider this erosion to have been accomplished by water-action during a period of heavy rainfall, when the Nile was deepening its valley to its final (unknown) bed-rock depth, and a reversal of flow took place in the Hawara channel, the drainage from the Faiyum once more passing through it to the Nile.

The problem as to whether wind or water was the main agent in the hollowing-out of the Faiyum depression is one of great difficulty—Drs Sandford and Arkell cannot be said to have made out a quite sufficient case for the rejection of the older theory of wind-action. The later erosion, at any rate, cannot have been accomplished by water if the statement of Sir Hanbury Brown that a rock barrier exists across the Hawara channel at a level of about 18 metres above sea is correct ; and it seems hardly justifiable to dismiss this statement as a mere tradition without a very careful examination of the rock-exposures on which it was based. The indication of rock at the side and not in the bed of the channel in the cross section of the ravine behind Hawaret-el-Maqta on p. 98 of Sir Hanbury Brown's book proves nothing in regard to the barrier mentioned in his text ; for the section may very possibly not have been measured at the place where the rock bed is highest, any more than is obviously the case with the section across the Bahr Yusuf which is figured on the same page. That wide and deep hollows have been excavated by wind-action in the northern part of the Libyan Desert can hardly be doubted ; for in the case of the Qattara Depression, which is vastly larger than the Faiyum and nearly three times as deep, recent careful contour-mapping has revealed no trace of an exit channel, nor any indication of local subsidence as an alternative mode of origin.

The time-level graph appended to Miss Caton-Thompson and Miss Gardner's paper aids greatly in grasping the sequence of changes of

THE FAIYUM DEPRESSION

lake-level, and the map in Drs Sandford and Arkell's book enables the boundaries of the geological formations and the courses of the different implement-bearing terraces to be easily followed ; the map would have been even more illuminating had more topographical detail been incorporated in it from the survey maps of the region, more especially as regards the relief of the ground. The authors of both publications would have done better to have followed the practice of the Survey of Egypt and the Irrigation Department of expressing all altitudes in metres above or below sea level ; it is a little troublesome to have to remember, when one is reading the different accounts, that Miss Caton-Thompson and Miss Gardner's 222-foot lake, Drs Sandford and Arkell's 74-foot lake, and Sir Hanbury Brown's 22-metre lake are all one and the same, and to be compelled to resort to calculation, of however simple a kind, before one can compare the levels given by the authors with others expressed on the official system or figured on the survey maps of the region.

The two publications, each admirably supplementing the other, form a very important and most welcome contribution to the prehistory and to the Pliocene and Pleistocene geology of Egypt, and the authors are all to be heartily congratulated on the valuable accessions to knowledge resulting from their labours. The publication of the results of Drs Sandford and Arkell's further investigations in the Nile Valley and its tributary Wadis will be eagerly looked forward to ; and it is to be hoped that Miss Caton-Thompson and Miss Gardner will extend their researches to other depressions of the Libyan Desert. Flint implements are known to exist in the oases of Kharga and Siwa ; it would be most interesting to know the age of the prehistoric settlements in these localities, and the routes by which ancient man reached places so remote from the Nile Valley. Another interesting question is as to whether lakes and human settlements may not have existed in prehistoric times in depressions which are now uninhabited by man, such as, for instance, that of Qattara, wherein up to the present no lake deposits have been recognized and only one or two flint implements have been picked up.

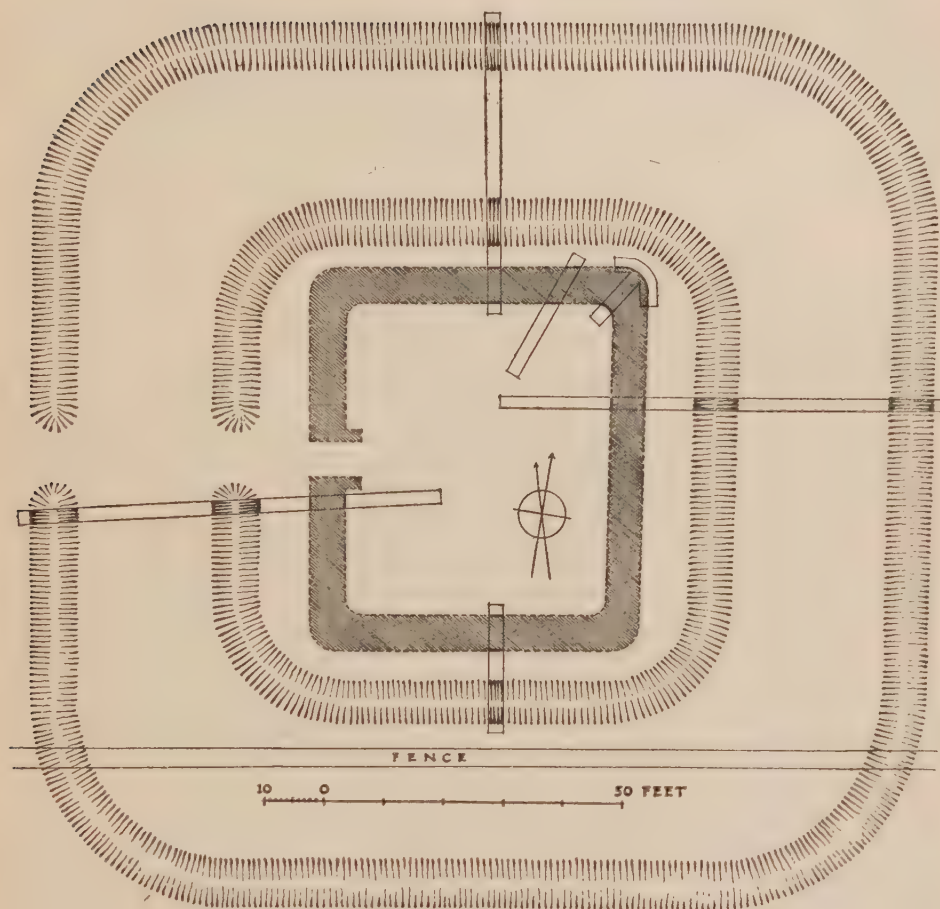
A newly-discovered Roman Site in Cumberland

by R. G. COLLINGWOOD

IT has always been part of the programme of *ANTIQUITY* to insist on the value of air-photography as an archaeological method ; and records of discoveries made by its use have often appeared in the pages of this journal. Here is another such record ; the first, I think, in which air-photography has led to the discovery and excavation of an altogether unknown Roman site.

In July 1930, Wing-Commander Insall, v.c., whose discovery of Woodhenge was one of the most spectacular triumphs of archaeological air-photography, photographed from the air a site close to the main road between Penrith and Carlisle. The site, revealed by a crop of wheat, showed as a double square—one square inside another—with rounded corners. The editor of *ANTIQUITY* at once recognized it as Roman, and connected it with the signal-stations of that period ; he sent the photograph to Mr R. E. Porter of Rydal, whose intimate knowledge of the district soon enabled him to identify the site on the ground, with the help of Dr W. Goodchild of Threlkeld. Arrangements were made for digging, and a day's work was done in September by Mr Porter, Dr Goodchild and myself. We employed only two labourers, whose wages were repaid by a grant from the Research Fund of the Cumberland and Westmorland Antiquarian and Archaeological Society ; but thanks to the air-photographs we were able to determine the plan, dimensions, general character, and date of the site without any difficulty. The plan here reproduced is based on a combination of the air-photographs and our trenches. The outer ditch on the south is in a grass field and was not shown by the air-photograph ; its course south of the fence is conjectural. With this exception, the general shape of the site was given by the photographs ; they showed the double square of ditches, the rounded corners, and the entrance on the west* ; they also faintly revealed the wall of the fort. It only remained to find the dimensions by trenching, in order to lay down a number of fixed points between which the forms seen in the photographs could be sketched in. This is the method by which the plan has been made.

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Roman fortlet on Barrock Fell, Cumberland

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It was quite impossible to trace the form of the site on the ground after the corn had been cut, and therefore the amount of digging which was saved by possessing the air-photograph must be reckoned a very large percentage of the whole.

The site is half a mile north of Low Hesket village, and about 220 yards east of the seventh milestone south of Carlisle along the Penrith road. This road is Roman, and six miles farther south it passes the fort of Plumptre Wall or Old Penrith, which appears in the Antonine Itinerary as Voreda. The newly-discovered site is therefore about half-way between Old Penrith and Carlisle. It lies a little above the road, on a tiny level shelf in the side of a slope running up eastward to the summit of Barrock Fell. The advantage of placing it here, instead of on the road itself, consists in the fact that it commands a good view. Northwards, in clear weather, Carlisle is in sight and one could exchange signals with it; while, even in thick weather, a single intermediate signal-station on Carleton Hill would keep touch with both places. Southwards one sees the isolated conical peak of Thieveside Hill, which would serve as a link with Old Penrith. By its situation, therefore, one would suppose this site to be one member of a chain of signal-stations along the main road south from Carlisle. It is very probable that many, if not most, main Roman roads were equipped with such things; for, although we have only one well-established instance—the road running down the left bank of the Earn from Strageath—small signal-stations are very difficult things to find; and, without systematic search, especially with the help of the aeroplane and under favourable conditions, it would be rash to deny their existence along other roads as well. Indeed, the search for signal-stations on Roman roads is one of those things that call urgently for attention on the part of field-workers and aerial observers.

But excavation soon showed that the Barrock Fell site was not quite like any known type of signal-station. There are three well-established types in Britain. First, there is the wooden tower with a circular ditch round it, as on the Strageath road. These are probably of the first century A.D. Secondly, there are the stone towers, about 20 feet square, which were built in the first half of the second century. Thirdly, there are the much larger towers, 45 or 50 feet square, surrounded by a curtain-wall and a ditch, belonging to the late fourth century and found on the headlands of the Yorkshire coast. In all these cases the essential thing is the central tower. At Barrock Fell, this tower seems to have been absent. We found a rectangular fortlet,

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65 by 56 feet externally, defended by a stone wall 6 feet thick built in the ordinary Roman fashion, with a core of rubble set in lime mortar and a coursed face of rough quarry stones on either side. This fortlet cannot itself be regarded as a tower; it is too large, and its walls are too thin; and a tower would, on analogy, have been square. Nor does it seem to have contained a tower inside itself. The trenches which we dug in its interior, down to virgin soil, revealed no foundations of any kind, and the nearer they approached to the centre of the fortlet the less they contained in the way of fallen building-stone. All the fallen stone which we found appeared to have come from the fort-wall. Incidentally, it may be remarked that we found no floors, roofing-slates, nails, or other relics of internal barrack-buildings.

The ditches surrounding this fortlet were rather curious. There were two, each about 8 feet wide and 3 deep, and they were about 30 feet apart centre to centre. But they were laid out in a square, not in a rectangle similar to that of the fortlet itself; so that, at its ends, the fort-wall is separated from the ditch by a very narrow berm of $3\frac{1}{2}$ to 4 feet, while at its sides the berm is about 8 feet wide. It is tempting to conjecture that the ditches were originally dug in order to surround a square building, perhaps smaller than the present one, and that the stone fortlet was an afterthought. Such a change of plan is not inconceivable. The first intention may have been to put up a signal-tower on Barrock Fell; on second thoughts, it may have been decided to erect a small fort instead, to act as a half-way house between Carlisle and Old Penrith.

Pottery was found in sufficient quantities to establish the date of the fort. Some was picked up on the surface of the ground; some was found inside the walls, and some in the ditches. Almost all of it was Huntcliff ware, that is, the hard black or brown hand-made ware, containing lumps of calcite, which is characteristic of the late fourth century in the north of England. The few sherds which were not of this ware fitted in reasonably well with the chronology which it suggested. Clearly, the Barrock Fell fortlet belongs to the latest phase of the Roman occupation, its life probably falling altogether in the second half of the fourth century. During this period we know that Count Theodosius, about 370, reorganized the defences of the British frontier; and there is no reason why he should not have put up new signal-stations and wayside forts on the roads leading to the Wall; but the evidence from Barrock Fell does not enable us to say anything more definite about its origin.

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Comparatively little attention has been paid to Romano-British sites of what we are here calling the fortlet type. They are fairly numerous, however, and fall into various classes according to size. One pattern measures about a quarter of an acre inside the defences ; examples are found at Bar Hill (first century), Castleshaw (early second century), Maiden Castle in Stainmore (probably the same date), Castle Greg, and Makendon or Chew Green. But this example is much too small to be classed with those. Its internal area is only about one-fifteenth of an acre (53 feet by 44), and I know of nothing in Britain quite comparable. But several very similar fortlets exist along the German *Limes* ; examples of just about the same size—18 to 20 metres square externally—are found, for instance, at Seitzenbuche, Robern, Raitenbuch, Petersbuch, and Hirnstetten (*O.R.L., Lieferung* 44, plates 10, 12 ; *Lieferung* 45, plates 9, 10, 11). These were doubtless used by the *personnel* of the signal-stations along the *Limes* ; and in this connexion it may be pointed out that the dimensions of these fortlets correspond closely with those of the milecastles on Hadrian's Wall, which are generally regarded as providing quarters for the men serving the adjacent turrets—which are merely signal-stations—on the Wall. The evidence therefore suggests that fortlets of this very small pattern are normally associated with chains of signal-stations, and are designed to accommodate small detachments of men resting from duty in the neighbouring stations.

Attention has been called to a curious feature of the ditch-system ; but another curious thing about it is the wide interval separating the two ditches. In Roman fortifications of the early Empire the ditches are close together and close up to the wall which they defend ; the berm is no wider than is demanded by the weight of the wall and the need to prevent it from crushing the lip of the ditch. But in the late Empire we find a wide berm coming into favour, the purpose of which is to keep the enemy's siege-engines at a distance from the wall and to compel assailants to traverse a carefully-prepared field of fire without their help. This wide berm appears even in quite small fortifications of the later period ; the Yorkshire coastal signal-stations, for instance, have a berm 30 feet wide. The wide interval between the ditches at Barrock Fell is best understood by bringing it into relation with this new tactical idea.

It would be satisfactory to be able to point out exact parallels to this new fortlet. But I know of only one where the similarity is at all close. This is Old Burrow Camp, on Exmoor, which was excavated

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by Mr H. St. George Gray, F.S.A., in 1912 (*Trans. of the Devonshire Association*, XLIV, 703). Here, as at Barrock Fell, we have a square, round-cornered, Roman site consisting of an outer ditch separated by a wide interval from an inner ditch within which is a small fort. The only differences are, first, that Old Burrow Camp is somewhat larger in all dimensions—the fort roughly 70 by 80 feet internally, and the ditches 80 feet apart centre to centre; secondly, that the inner ditch is double, and thirdly, that the fort is of earth instead of stone. But apart from these minor points the resemblance is very close; and it is interesting to notice that at Old Burrow Camp the outer ditch is 'punic', that is, its counterscarp is vertical, in order to prevent assailants who have crossed it from getting away again, so that they are trapped between the ditches. The date of Old Burrow Camp was not established; but its general features would lead one to place it late in the Roman period, and to explain it as a fortlet of the Barrock Fell class, that is to say, a place intended to house small groups of men serving signal-stations in the neighbourhood.

Notes and News

THE ERECTION OF A *DUBU*

Dr C. G. SELIGMAN writes :—

Owing to absence abroad I have only just seen Mr Hutton's article on Assam megaliths (*ANTIQUITY*, September 1929). This and the recent discoveries in this country of Mr and Mrs Cunningham move me to send an account of the erection of one of the big ceremonial platforms (*dubu*) of the Central District of British New Guinea. The photographs I attempted to take of the actual process failed owing to a leaky camera, but the form and size of these structures is well indicated in the illustrations (plates I-II). For the larger (I), that of a *dubu* in the Motu village of Gaile, I am indebted to my friend Captain F. R. Barton, C.M.G.; the smaller (II) represents I believe one of the older *dubu* of Kapakapa when that village—built in 1898 on piles in the sea—was mainly terrestrial. Those interested in the purpose of the *dubu* and its decorative art will find some account of these matters in a paper contributed to *IPEK* in 1927;* here it will be sufficient to indicate that the ceremonial life of the village centres round the *dubu*, and that the corner posts of the biggest I have seen were over 30 feet high with a diameter of at least two feet. The smaller examples reproduced have posts with a diameter of about two feet, their respective heights being some 10 feet and 15-18 feet respectively.

In 1898, when I witnessed the erection of a new *dubu* (closely resembling the smaller reproduced on plate II) in the Sinaugolo village of Gumori Dobo, the natives of the district were but emerging from the Stone Age so that at Hulaa—a coastal village distant only some 20 miles—I had seen a few weeks before a whole fleet of dug-out canoes being made with stone adzes. Before erecting the Gumori Dobo *dubu* the ground plan had been determined, the holes for the

* 'The Dubu and Steeple-houses of the Central District of British New Guinea'. *Jahrbuch für Prähistorische und Ethnographische Kunst*, 1927, 1, 177-92. This *Jahrbuch* is generally referred to by its initials as *IPEK*; it is edited by Professor Herbert Kuhn, and published by Klinkhardt and Biermann of Leipzig.—EDITOR.

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corner posts dug and the material assembled, with the result that the dubu, not seriously begun till midday, was finished by 5 o'clock. Such 'jaws' of the corner posts as those alluded to in the account of the erection of this dubu are well seen in the photograph of the one at Kapakapa, while in the Gaile dubu the holes cut in the upper part of the posts would be equally serviceable for rotating these into position. To make what follows intelligible I should add that the carved posts and timbers of an old dubu were often used in constructing one afresh in a new village.

The first stage of the building of the dubu was to pull each corner post to the hole already prepared for it.

Its jawed or excavated end was then lifted by a crowd of workers who pushed it along until its opposite uncarved end slid across the hole and touched its far side, being received on a flat piece of wood or two rounded poles held by a man squatting at the edge of the hole. As soon as the post struck this the men holding its carved end raised it more and more, the fulcrum for the movement of the whole post being the near edge of the circumference of the hole. As the post was elevated the lifting power of the crowd was necessarily applied nearer the fulcrum, but in spite of the mechanical disadvantage this entailed the post was speedily raised. It was rotated into position on the capstan principle, a stout pole notched near one end being placed within the jaws at the top of the post so that the notch caught against the inner surface of one jaw when force was applied at the opposite end of the lever thus formed. Earth was then packed with hand and digging sticks into the space around the post, and firmly trampled down. The other four posts were got into position in the same manner, the height of each being allowed for by varying the depth of the hole dug. The correct depth was ascertained by laying a sapling alongside the post, then marking it at the length of the post and holding it upright in the hole while a cord passed between the jaws of the post already erected was carried horizontally across the top of the sapling. In spite of these precautions one post when placed in position was found to be a few inches higher than the other, and it was quickly taken out of the hole and part of its base removed while the hole was deepened. After the corner posts had been orientated the horizontal poles which would presently carry the boards forming the upper platform were got into position. These measured about 27 and 30 feet respectively; the longer of the two was not new but had been brought from the old village of Kwali-marupu earlier in the day, where it was taken from the old dubu.

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Inclined planes were formed leading halfway up the main posts by lashing to these a number of stout saplings. On these men stood, others supported by comrades clung to the post, and when the cross-piece was lifted received its end and guided it between the jaws of the corner post. The near end was then lifted up until it was in the same horizontal line at the base of the jaws of the posts that would receive it, when it was pushed along and its end guided into the jaws of the second post by men standing on inclined saplings lashed to that post.

The cross-piece was lifted to the horizontal, and maintained in that position while being moved forward between the jaws of the corner post by a special device. Two stout poles were taken and laid across each other so that an x-shaped figure was formed, with arms of very unequal length, the two lower arms being perhaps 10 feet long and the upper arms scarcely a foot. The poles were then bound together where they crossed each other, the lashing being contrived to allow a certain amount of play ; so producing a very long handled short bladed pair of tongs. A couple of men took hold of each of the longer arms, and as the horizontal pole was raised from the ground to shoulder height it was allowed to rest in the crutch formed by the short arms of the instrument, and lifted into the horizontal position by bringing the long arms into a plane at right angles to the horizontal piece they were supporting.

This all happened smoothly enough in the case of a new cross-piece, but it was found that the cross-piece from the old dubu was too thick to lie between the jaws of the new corner posts, which were accordingly further excavated. Finally, boards that had been used to form the floor of a small temporary platform which stood in the village street were brought up and put across the two horizontals to form the top platform of the new dubu.

It will be seen that no bank of earth was required at any stage of the building, though I think that a temporary scaffolding may have been used in the erection of posts well over 20 feet in some of the older dubu.

A SAXON FISH-POND NEAR OXFORD

In the bounds of land near Oxford reputed to date from the tenth century a certain bound-mark is mentioned under the name of *stirigan* or *styrian pol*. *Pol* of course means pool or pond ; and the dictionary translates *styria* by sturgeon, derived through the French *esturgeon* from the same Teutonic source. It adds, however, that

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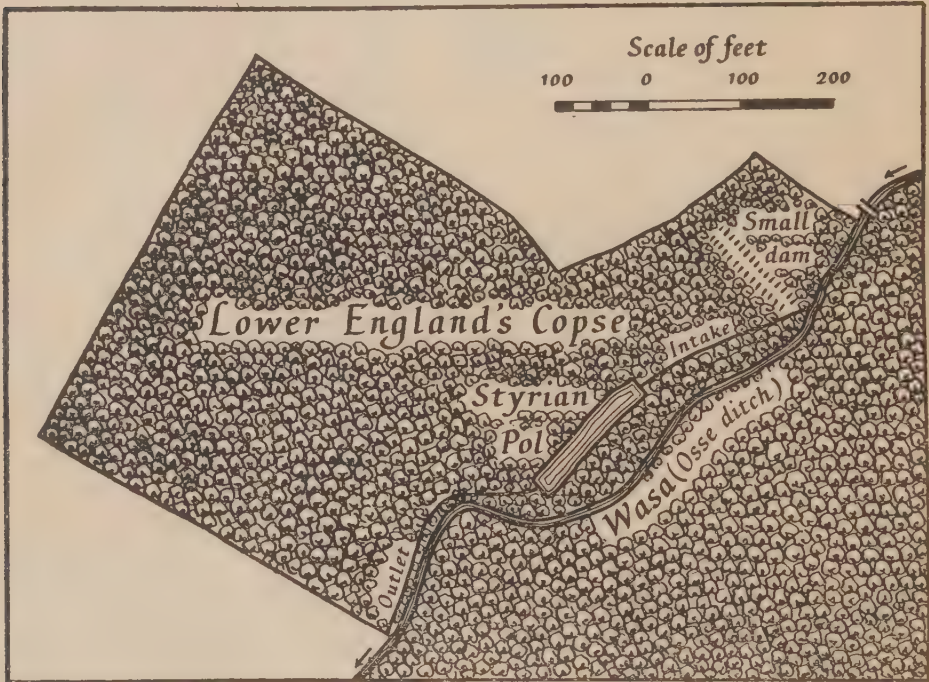
styria 'is used as the equivalent of several Latin names of fishes', such as *cragacus*, *porcopiscis*, *rombus*. We cannot enter into a discussion of such words here, though we should like to know exactly what *styria* means. For our present purpose the words may be translated simply 'fish-pond'.

The expression *styrian pol* occurs twice; in the bounds of Besselsleigh, A.D. 959 (Earmundesleah, Birch, *Cart. Sax.* III, no. 1047) and in those of Eaton, A.D. 968 ('aet Cumenoran', Birch, *C.S.* III, no. 1222). These charters have been investigated by Dr G. B. Grundy whose notes on them are published in *Berks, Bucks and Oxon Arch. Journ.* vol. XXVII. Dr Grundy locates *styrian pol* 'close to the Cumnor road, where the old Eaton boundary crossed it about $\frac{1}{4}$ mile north of the north edge of Appleton village' (Berks, 5 SE); that is to say, on the road from Appleton to Cumnor and Oxford, between Hengrove Wood on the northwest, and Lower England's Copse on the southeast. (This road was made after 1761; it is not shown on Rocque's map). It is, to say the least, most unlikely that a fish-pond would be found on a watershed. Moreover, I have the impression that the *pol* is generally applied to ponds connected with or adjacent to running water. However this may be, the site of *styrian pol* must be, as Dr Grundy admits, 'somewhere close to what was in Anglo-Saxon times the meeting-place of the boundaries of Appleton, Eaton and Besselsleigh'. Dr Grundy regards it as impossible to determine the course of the boundary between Appleton and Eaton; but I think he is unduly pessimistic. It must have run about midway between the two villages, and can hardly have hit the Appleton brook more than, say, a quarter of a mile from Lower England's Copse. Personally I think there can be little doubt that it followed a long line of hedge which for the last part of its course forms the southern boundary of Lower England's Copse. The modern parish of Besselsleigh nowhere extends beyond (NW of) the Appleton brook; and the common meeting-place of the aforesaid three parishes must surely therefore be looked for on or within a few yards of this stream.

When doing some field-work in this district last spring, I was puzzling out these bounds, and when studying the 6-inch map (Berks, 5 SE) I noticed, in Lower England's Copse, a narrow rectangular piece of water indicated, lying roughly parallel to the stream, in a bend. There seemed to be no existing *raison d'être* for the pond, yet it was obviously artificial. It occurred to me that this might be *styrian pol*; and so it proved to be. I visited it with a friend, and we found that

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it was an obvious fish-pond, having every appearance of great antiquity. It is 160 feet long and 30 wide. At the upper end is a small intake or feeder, to supply it with water from the stream; off at right angles to this feeder, towards the higher ground, runs a small bank or miniature dam. At the other end there is an outlet from the pond to let the water run back into the stream. On the side of the pond away from the stream is a bank, consisting doubtless of the excavated material.



Earthworks of proven post-Roman, pre-Conquest age are so rare that they are worth recording. Surely we have here the humble ancestor of those elaborate fish-ponds that occur near all important medieval establishments? There are many in this district. Between *styrian pol* and Besselsleigh Manor there are several, and also between the Manor and Dry Sandford.

The stream itself is of interest from the fact, discovered by Dr Grundy, that it was originally called *Wasa*. This word is preserved as *Osse ditch* on the tithe map. That the *Wasa* of Birch nos. 777 and

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1047 (Appleton) and of 977 and 1221 (Fyfield, Berks) is identical with the *Wase* or *Wæse* of 1222 (Eaton) admits of no doubt, nor can Dr Grundy's identification be impugned. It is as certain as anything can be that *Wasa* and *Wæse* both refer to the Appleton stream. I have studied the charters independently and been over much of the ground with a 6-inch map; and in this matter I entirely agree with Dr Grundy,* and regret the footnote on p. 437 of Professor Ekwall's 'English River-names'.
O.G.S.C.

BABYLON OF EGYPT

Mr E. H. SAWYER writes:—

Concerning the mosaic discovered in the church of St. John the Baptist at Jerash, Transjordan (described in *ANTIQUITY*, December 1929), is not this probably a representation of the still existing Roman fortress of Babylon in Egypt, now known as Old Cairo? It lies on the east bank of the Nile, where the one great route from Asia ended, as shown by the Itinerary of Antoninus, and it faces the northern end of Memphis on the opposite bank. The site is of great antiquity. Traditionally it was founded and named by Babylonian prisoners of Rameses II and first fortified by Nebuchadnezzar. In hieroglyphics it was 'Per-Hapi-n-On', that is, 'House-of-Apis-of-On'. Roman and Crusader called it 'Babylon' and maybe the name gave rise to the above tradition. When the Romans conquered Egypt in 30 B.C., Augustus placed one of his three legions at Babylon, then the most important town after Alexandria and the key to the south and to Memphis, which was already partly in ruins and is not known ever to have been fortified. In Roman times there was a bridge of boats here across the island of Roda to Memphis, and Babylon formed the bridge-head. The present great fortress was built by Trajan about A.D. 100.

Babylon, possibly owing to its Asiatic origin, was the home of the Jews living in Egypt. In it Joseph and Mary with the infant Jesus passed their period of exile, the site of their dwelling being traditionally marked by the crypt of the church of Abu Serga. To it came Mark and Peter in A.D. 45; here they founded the Church of Egypt, and here the latter wrote his 'First Epistle General', and the former, according to Coptic tradition, most of his Gospel. Together

* Dr Grundy has re-affirmed his views in a review of Professor Ekwall's book, published in the *Geographical Journal*, 1929, LXXIII, 469.

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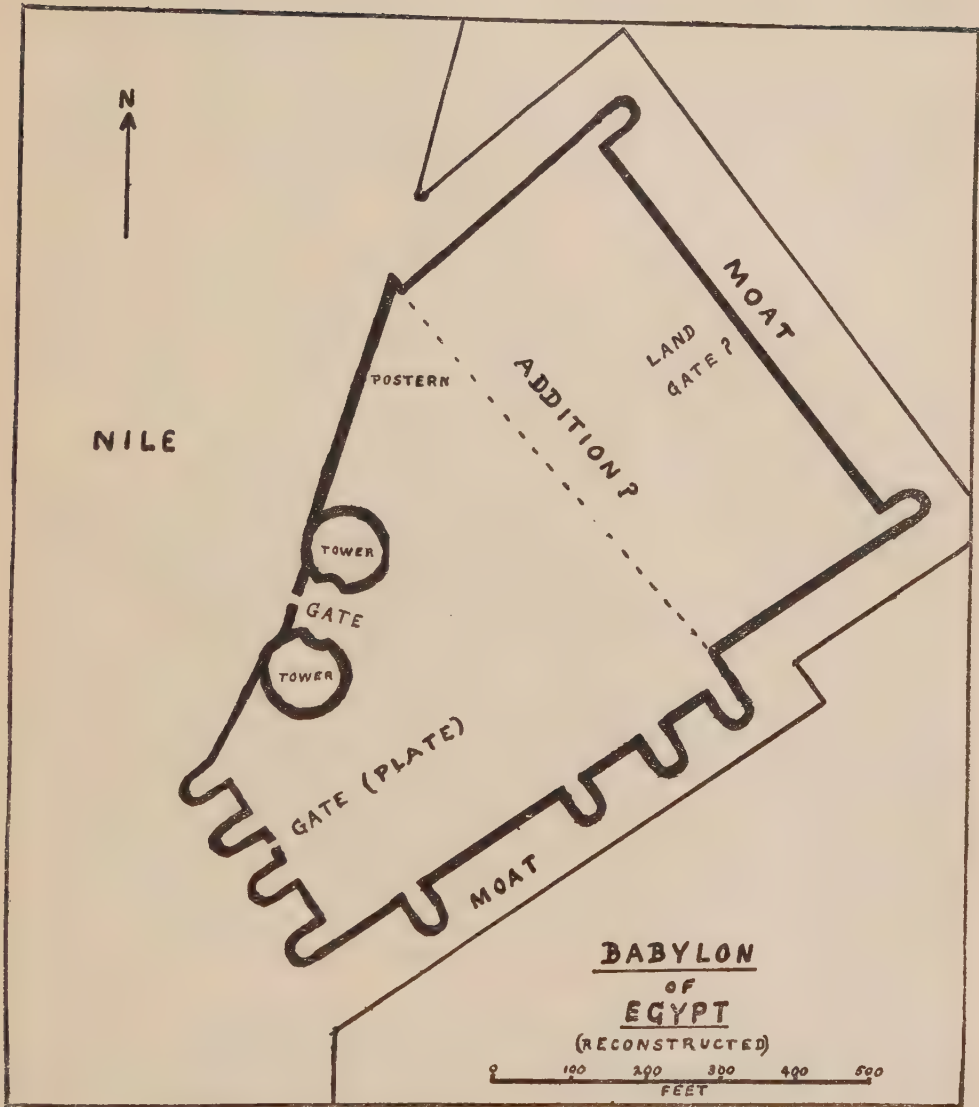
with Alexandria it became the centre of Christianity and many churches were built there. But while the sea-port was forcibly converted to Islam, Babylon has remained to this day entirely Christian. On the contrary, Memphis with its temples continued until very late times to be the home of the ancient religion. Returning to our contention, a Christian mosaic-worker at Jerash would clearly remember two places in Egypt; the patriarchal city of Alexandria and the fortress of Babylon.

If the mosaic be compared with the accompanying plan, it will be seen that it is just such a representation as might be given by a worker from his memories of a year or two back. The two watergates are in the right positions, the number and the places of the forward bastions and towers are correct; on the other hand the bastions appear to be shown as square instead of half rounded, the towers are not given sufficient prominence, and the northward part of the fortress is entirely omitted. But the whole of the northeast quadrilateral seems to have been a later addition to the building, which would explain the two angles that occur in the ground-plan.

In the days of Trajan the fortress was most imposing, with walls 50 feet high, bastions, towers and gateway 70 feet; the south and west walls were washed by the Nile, which flowed through a moat on the land sides. Today the surrounding soil has risen some 30 feet—over a foot and a half per century—and the river lies a quarter of a mile to the west. The walls are built in the usual Roman manner; five courses of limestone 3 feet in height alternating with three burnt brick courses of 1 foot; at the base they are 8 feet thick, changing near the top to 5 feet, the offset being on the inside.

The Moslem conquerors in A.D. 640 besieged Babylon in vain for seven months, and it was only by treachery that the last Imperial troops were expelled. In A.D. 1168 it was gutted by fire to prevent its falling into the hands of a crusading army. After Roman times many reconstructions were made. When the Nile receded a postern was cut in the northwest wall 12 feet below the present ground level. Steps now lead down to it and until five years ago it was the only entrance to the interior streets. As the ground rose, the walls were heightened from 12 feet to 20 feet in various parts. On the roof of the south gate was built 'El Muallaka', the Hanging Church, cathedral of a bishop for many centuries, the outer wall now rising another 30 feet of poor brickwork. Between the two western towers, where presumably the bridge-gate stood, there have been only heaps of rubble for the last

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fifty years, but everything points to the existence of a former entrance. There is no trace of the land-gate, which must have faced the road to Asia on the northeast. The fortress has suffered greatly from alterations in the last hundred years of tranquillity, a number of the bastions and sections of the outer wall having been removed. Every few years sees further changes; at the present moment large pieces of Roman wall inside the southern gate are being pulled down. It seems a pity that so little is being done to preserve a monument unique in Egypt.

The south gate, shown in the illustration (plate III), was formerly buried to the top of the arch, but was excavated, with its two bastions, in 1901 down to the level of the subsoil water, which shows at the bottom left corner. The gate and bastions stand on an 8 foot base of large slabs, one of which shows ancient Egyptian sculpture; the gate is entirely of stone, with some modern refacement; the bastions are of alternate brick and stone, with much modern brick support. Under the projecting corner of the pediment on the right there is carved a small Roman eagle; above the centre of the pediment a tablet has been defaced. It was obviously a water-gate for shipping from Upper Egypt, the lowest part of the illustration on the right forming a small quay. The interior floor of the gate is some 6 feet above water-level; a stone threshold 15 inches higher than this floor indicates that it was not intended for vehicles, nor are there any wheel-marks. Of the original wooden doors, opening in the middle and closing against the threshold, only the stone sockets are now visible. About 8 feet further inside the gate was the portcullis in a stone archway, the left grooved pier of which may be seen in the picture. The three other buttresses visible are modern constructions supporting the floor of the church above. The inner hall of the gateway is adorned on either side with round-topped niches intended for statues. Under its floor runs a Roman drain, partly uncovered in the illustration, with its exit under the threshold; the present-day ground-level inside the fortress is 15 feet higher.

There is one very simple means of discovering whether the mosaic represents Memphis on the west bank or Babylon on the east; and that is the direction of flow of the water. If from left to right, it is Memphis; if from right to left, it is Babylon. In the illustration published in ANTIQUITY it seems from the zigzags in the foreground that the river is running towards the left; a close inspection of the mosaic itself should answer the question.

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A WOODEN IDOL FROM IRELAND

Dr ADOLF MAHR, Keeper of Irish Antiquities in the National Museum, Dublin, writes:—

The wooden idol, illustrated on plate IV, is now in the National Museum of Ireland, Dublin. It was found in a bog at Ralaghan, parish of Shercock, co. Cavan; the Museum is indebted to the owner of the bog, Mr Halpin, to Mr James Traynor of Bailieborough, co. Cavan, and to Mr Peter F. Connolly, v.s., of Andover, Hants., for the preservation of this interesting object, the first of its kind hitherto recorded in Ireland.

The figure was found, while cutting turf, under 3 to 4 feet of peat. The bog has been reclaimed since, but there is good reason to hope that a palaeo-botanical examination of the site will still be possible. It is made of yew* (*Taxus baccata*), its height being 3 feet 8½ inches (113.5 cm.).

There were no arms though the body is rather carefully carved. The hole in the centre, obviously intended for the insertion of a male organ, is drilled and the whole region is somewhat accentuated.

The projection at the base was inserted, I am told, into a socket cut in a square block-shaped pedestal, about a square foot in area; it is now lost. The figure lay on its face. Nothing else had been found previously or since.

A few figures of more or less similar workmanship are known from different European countries (including Great Britain, Denmark, and Germany). The female idol from Ballachulish is the nearest British parallel (*Proc. Soc. Ant. Scot.* 1880-81, xv, 158). A very striking resemblance is offered by the male idol from Alt-Friesack in Brandenburg (Albrecht, *Mainzer Zeitschrift*, 1928, xxiii, 47). This is supposed to be Slavonic, but it does not follow that other figures, even if that be so, must necessarily also be of similar late date.

ABINGDON

The picturesque old town of Abingdon, near Oxford, is a typical English provincial one of the best kind—such as before the invention of motors was called ‘sleepy’. It bears an aspect of immemorial antiquity, befitting a place that was established several centuries before

* The wood was kindly examined by Dr P. O'Connor, Keeper of the Natural History Division of the National Museum of Ireland.

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Oxford was heard of. It owes its fame chiefly to the abbey, barely one vestige of which now survives.

It is not generally known that the name Abingdon is not original but was transferred to it, with the abbey, at the end of the 7th century. Our evidence is mostly late, but it is consistent, and it is supported by a striking and hitherto misunderstood phrase in a charter of the reputed date of 955.¹ The bounds are those of the parish of Abingdon itself (then much larger than now); they profess to record the extent of Ceadwalla's grant of 689 or thereabouts; and they mention a certain 'abbendune' as lying near the 'head of bromcumbe', and traversed by a 'port strete'. This site is easy to locate; the former name survives in Brumcombe Copse and House, and the 'down' can only have been the high ground followed by the modern road from Foxcombe Hill towards Oxford. This then was the tract of down called 'Abingdon'—a narrow upland ridge with, probably, few signs of human habitation.

The site thus identified agrees closely with the position assigned to the 'mons' of Abendune 'qui juxta Baiwrthe situs est juxta Pinnesgrave'; or between Bayworth and Pinsgrove (*Ab. Chron.* II, 268). Bayworth is the village in the hollow between Foxcombe Hill and Bagley Woods; and Pinsgrove was the name of a copse south of Chilswell.² Between the two runs the aforesaid ridge.

It was here that Hean began to build a monastery in 675. He had been given a large grant of land to support his new foundation, but the building itself made little progress. Possibly it was the land that Hean wanted, and the religious foundation merely a means to attain that end. Bede speaks of laymen who 'under the pretence of founding monasteries acquire for themselves territories in which they may have free scope for their lust', (Letter to Bishop Egbert of York). In any case Hean had not even become a monk in 695, twenty years after Cissa had granted him the land.

There is however a slight uncertainty about the *exact* site where

¹Published in the *Abingdon Chronicle* (Rolls Series, 1858) I, 124, and in Birch, *Cart. Sax.* III, 68. Dr Grundy (*Berks, Bucks & Oxon Arch. Journ.*, 1922, XXVII, 98, 99), puzzled by finding an 'abbendune' so far from the town of that name, attempts to emend the text, but he has missed the point. There is really no difficulty to be overcome.

² Pinsgrove is not marked on the Ordnance Map; but Hearne refers to a 'town' of that name as having been situated $\frac{1}{4}$ of a mile SE of Chilswell, and he also speaks of Pinsgrove Coppice. *Lib. Nig. Scacc.*, 1774, II, 565.

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Hean first began to build his upland monastery, just as there is about the exact date of its transference to the banks of the Thames. One account³ says it was 'founded on the spot where now is a monastic cell' (*cellarium monachorum*); another that it 'lay on a plateau with an extensive view, just beyond the village of Sunningwell'.⁴ The former account gives precise details of the buildings which, if reliable, prove that a good deal of work *was* carried out on the hill, before the transference. The site associated⁵ with these descriptions is on Chandlings Farm, where in a grass field numerous banks and old foundations are still to be seen. What we now see is doubtless of much later date; but excavation might well reveal the foundations of Hean's structure.

The place where Abingdon now stands was formerly called Seovechesham—'the settlement of Seofeca'—a Saxon personal name also preserved in Seacourt near Botley (OE *Seofecan wyrth*). It is described as a 'famous city, pleasant of aspect, full of wealth, surrounded by fertile fields and verdant meads'. It is also said to have been an important place of religious gatherings 'a primis Britonum temporibus'; but we must remember that our authority is a writer of nearly a thousand years later. There is however archaeological evidence of a Romano-British settlement at Barton close outside the modern farm; and there is evidence from air-photography of a very thick prehistoric inhabitation of the immediate neighbourhood. People have lived continuously on the gravel flats beside the Thames here for more than 4000 years. Some echo of its earlier history may have trickled down to the monkish chronicler by word of mouth or in writings now perished.

When the monastery was transferred the name went with it, superseding that of Seovechesham. The lowlying position seems most unsuitably described by the suffix -dune (in Abingdon), and this has always been a difficulty. It is now removed. O.G.S.C.

EXCAVATIONS IN MESOPOTAMIA*

The annual exhibition of objects found at Ur was held last summer at the British Museum. It was chiefly remarkable for a magnificent

³ *Ab. Chron.* II, 272.

⁴ *Ab. Chron.* I, 3. This description would also suit the former site.

⁵ By G. W. B. Huntingford in *Berks, Bucks & Oxon Arch. Journ.*, 1925, XXIX, 140.

* We much regret that we were just too late to see Mr Guy Brunton's exhibition, and therefore cannot refer to it in this note. Reference is made to all three exhibitions in the current number of the *British Museum Quarterly* (vol. v, no. 2, pp. 73-6).

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plan of the whole site as it was 'in the time of Abraham, 2100-1900 B.C., compiled by A. S. Whitburn and C. L. Woolley'.† To the north and west were harbours and on the west the river Euphrates—a wonderful contrast to its present arid desolation. The objects from the lowest strata are, of course, of the utmost interest, and include a group of pots of a wholly new type. There is indeed enough stratified pottery at Ur to justify the employment of a student who could devote his whole time to it. There is what seems at a casual glance an almost bewildering range of types; and some doubtless persisted throughout long stretches of time. Nevertheless no single type can have remained absolutely unchanged for long, unless the pot-makers of Sumeria differed from those of every other country in the world, which we cannot believe. The chronology of prehistoric Palestine and of Roman Britain is to a large extent based upon a close study of pot-fabrics; the early chronology of Mesopotamia will never emerge from the uncertainties in which it is still involved until the humble potsherds are seriously and methodically studied. To do so adequately on a site like Ur is a whole-time job for at least one man; nor could final results be obtained from a single season's work. But such results as might be obtained eventually would prove of immense permanent value to all future excavators and students.

Amongst the minor exhibits we noticed a *notched* clay sickle, evidently modelled on the other kind set with notched flints (see ANTIQUITY, IV, 179-86). This example, too, proves beyond any doubt, if proof were still needed, that the clay sickles were actually used as such. Amongst objects described as of the 'late El Obeid period' (*i.e.* belonging to the fourth millennium B.C.) are some clay sling-bolts and a clay spoon. The lady with the fantastic gold head-dress occupied her usual position, and there was the usual wealth of *objets-de-luxe* that we have come to expect each year. In passing we might mention the fact that a non-archaeological friend of ours who visited the exhibition left it with the impression that the aforesaid lady's face and hair formed part of the original find. We think it should be made perfectly clear that they are merely a conjectural restoration.

In the gallery leading to the Ur exhibition were displayed some of the finds from Nineveh, where Dr Campbell Thompson is conducting

† One of the main results achieved last season was the determination of the course of the city walls. This and other features of the exhibition are described in the excellent guide prepared. (*Antiquities of Ur*, by C. L. Woolley). Mr Woolley's full report is printed in *Antiquary's Journal*, October 1930.

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excavations with the financial backing of Sir Charles Hyde and others. There are some sherds of painted prehistoric pottery (which would have been seen to better advantage if they had been washed first); they were described as 'found at a depth of 12 to 18 feet below the surface and beneath the level of the (presumed) Temple of Ishtar, founded before 2000 B.C.'. There were some flint and obsidian implements, and many sickle-flints (though not so described) could be seen amongst them. These too were covered with dirt, so that the glossy patina caused by use could only just be discerned. This would not occur in an exhibition of finds from excavations carried out in this country.

There was displayed a re-photograph of a mosaic air-photograph of Nineveh taken from a height of 6000 feet by the Royal Air Force (in December 1929). Being a re-photograph and not an original the fine detail is for the most part invisible or blurred. The original negatives seem however to have been quite good. We hope that in this instance the British Museum has taken advantage of the arrangement concluded three years ago on its behalf by the writer. By this arrangement the Air Council agreed to hand over to the Trustees any negatives of ancient sites which were no longer required for service purposes. They also agreed to allow ancient sites within reasonable distance of aerodromes or of regular flying-routes to be photographed. As a result of this mission the British Museum now contains the nucleus of a national collection of air-photographs of the Middle East. It rests with the Trustees to develop this collection along lines already prepared.

ZIMBABWE

A correspondent writes:—

'Miss Caton-Thompson's article in *ANTIQUITY*, III, 12, ends on a note of finality which I am sure she did not wish to convey. Having demonstrated the medieval age of the buildings, and having labelled them as 'typically African Bantu', the questions: Who built these 500 odd structures, and why did the builders choose the Zimbabwe site for the biggest and strongest? may be said to be re-opened. It is probable that no one, with the possible exception of Professor Frobenius, will dispute the period, but what exactly does Miss Caton-Thompson mean by 'typically African Bantu' when speaking of 'every detail in the haphazard building'? These buildings, of

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strikingly similar characteristics which fall (apparently) as regards time into a very short period, are confined to a small area of a large continent. It may be said here and now that none of these characteristics are found today in Bantu building use. In making this statement I have the advantage of having conversed with both Miss Caton-Thompson and Professor Frobenius; of having examined some of the ruins, including Zimbabwe and Khambi; of having personal knowledge of several Bantu tribes; and of being supported by scores of Europeans who have lived in the closest contact with the African native from the Atlas to the Cape.

‘Zimbabwe must be tackled afresh and the Monomotapa question re-opened, through the medium of Portuguese evidence. Now Portuguese chroniclers assert that the ‘emperor’ (of the Monomotapa) himself was a Mocaranga. A Dominican writing in the middle of the 17th century says that this ‘powerful king’ was a black man (‘com as carnes pretas?’). A reasonable supposition is that some great chief began a style of building which was carried on by his successors for a few generations, and that Zimbabwe was a capital and a gold depôt. The ancient mines lie thickly around, and subsidiary depôts down to Sofala have been definitely traced. It should be mentioned that an unknown but certainly very large quantity of gold sheets and beads were removed from Zimbabwe by the early adventurers. May we invite some Portuguese correspondent to re-open the question from the libraries of Lisbon?’

We have submitted the above to Miss CATON-THOMPSON who writes:—

‘In a short article verbal forms of dogmatism have to be used to some extent from literary necessity, since space forbids the qualifications introduced into a final publication. One would therefore plead that the case for the comparatively recent age and African origin of Zimbabwe and its allied buildings, should not be judged until full publication puts the reader in a position to assess the merits of the complete evidence. This evidence will appear in my book: *The Zimbabwe Culture: Ruins and Reactions* (Clarendon Press) which will appear this year, illustrated by 73 plates and 26 text-figures. The evidence for my claim that the Zimbabwe buildings are “typically African Bantu” is there given in detail, with illustrations. A limit has to be imposed upon the scope of archaeological inquiry; the

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significance of the Zimbabwe culture needs now to be explored from the literary records, Arab and Portuguese, and from the angles of cultural and physical anthropology'.

THE UNKNOWN MEGALITH

Within a few hours of the publication of the September number of *ANTIQUITY* the 'unknown megalithic monument' illustrated on the plate facing p. 364 was identified by two of our readers, and a third has since written with the same effect. We heard first from Major N. V. L. Rybot, F.S.A., hon. secretary of the Société Jersiaise, who informed us that it was the dolmen which formerly stood on the Mont de la Ville at St. Helier, Jersey, and that it was removed in 1788 to Park Place, Henley-on-Thames, Oxfordshire, the seat of Marshal Seymour Conway, then Governor of Jersey. It appears that the authorities of the island wished to find a place for the monument in order to build the Regent Fort on the site, and so at considerable labour and cost they made a present of it to Marshall Conway. While gratifying him they destroyed for ever the archaeological significance of the megalith.

The earliest mention of the monument, published in 1734, suggests that it had by then been partially uncovered but it was not until 1785, when the site was levelled for the purpose of a drill ground, that it was completely known. As the result of this a communication was made to the Society of Antiquaries in 1787 and printed in *Archaeologia*, VIII, 384-5, with an illustration and plan, and a letter from Governor Conway himself to the Earl of Leicester, President of the Society, is at pp. 386-8. These and other printed references to the monument were collated by Mr Reginald A. Smith in a very informative paper read to the Society of Antiquaries 20 March 1919 (*Proceedings*, series 2, 1918-19, xxxi, 133-44) in which he made necessary corrections in details and discussed the question of the vaulting of the dolmen and its date and purpose.

Recent Events

The Editor is not always able to verify information taken from the daily press and other sources and cannot therefore assume responsibility for it.

On the opposite plate we reproduce an air-photograph taken recently by Wing-Commander Insall, v.c. The site is not marked on the Ordnance Map and appears to consist of a central keep approached by an entrance between converging banks. The plan is unusual if not unique. The site lies between Abington and Robertson in Lanarkshire (43 sw), about a furlong west of the Clyde and beside the main road connecting Glasgow and England by Gretna Green and Carlisle.



Excavations at Oliver's Battery, near Winchester, have been rewarded by the discovery of a magnificent bronze bowl with enamelled escutcheons. It was buried with the skeleton of a warrior of the Saxon period (about the 6th century). The grave was in the rampart of a rectangular earthwork. For these details we are indebted to Mr W. J. Andrew, F.S.A., who has been supervising the work on behalf of the Hampshire Field Club, and who is to be congratulated on a find of exceptional interest.



Dr Mortimer Wheeler, Keeper of the London Museum (Lancaster House, St. James's, s.w.) is giving courses for students as follows :—
1. Outlines of British Archaeology from the earliest times to A.D. 100.
2. Roman Britain. 3. Saxon and Norman Britain (A.D. 400-1200).
4. Archaeological field-work in Britain. These lectures are given under the auspices of the University of London, at which Dr Wheeler is Hon. Lecturer in British Archaeology.



It will be news to many that Canada has a Historic Sites and Monuments Board. It was founded in 1919 and is administered by the National Parks Service, under the control of the Department of the Interior. No less than 150 sites have been marked by the erection of

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suitable memorials. Among them are a number of relatively modern French or English forts and a unique example of a double-walled aboriginal fort at Southwold near St. Thomas, Ontario. It is the intention of the Department ultimately to mark throughout Canada all those sites that have a distinct bearing on the history of the Dominion. (*Natural Resources, Canada*, published by the Department of the Interior, Ottawa, August 1930, vol. IX, no. 8, p. 2).



A correspondent sends us an account of a cemetery awaiting excavation in Northern Spain. It is practically undisturbed and lies on the high plateau of Old Castile, 8 miles north of the city of Burgos. The owner, Don Carlos Levison of Bilbao, and his son Don Roman, are ready to place all information at the disposal of a properly qualified excavator and to facilitate excavation.



Excavation at the hill-forts of Hembury (Devon) and the Trundle (Sussex) have revealed extremely interesting structural features, particularly in connexion with the entrances.



Excavations have been carried out in the camp of Dinas, near Llanidloes, Montgomery, which was suspected of being an earthwork of neolithic type. From a press report we gather that the results are inconclusive, owing to the tiresome habit of some of the prehistoric Welsh of not using pottery. (*Montgomeryshire Express*, 22 July)



Human remains and implements have been discovered embedded in sandstone at Tartanga on the Lower Murray river, South Australia. (*Yorkshire Observer*, 19 July).



The Daily Herald (11 August) rejoices, quite properly, in the destruction of the last hangar on the Stonehenge aerodrome and looks forward to the restoration of this part of the plain 'to the austere guardianship of Mother Nature'. *The Evening Standard* (11 August) has no illusions about Mother Nature, who 'is not the gentle old dodderer which townsfolk so often imagine her to be. Unless the authorities see to it that there are sheep or other correctives on Salisbury Plain, old Mother Nature will promptly set up thickets of

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thorn and juniper, and Stonehenge will ultimately become as difficult of approach as the Maya Temples'. Those who are unconvinced should inspect some of the adjacent War Office land and see what Mother Nature's rabbits can accomplish when freed from the corrective of foxes.



A beaker has been found in a round barrow on Ivy Lodge farm, near Woodchester, Gloucestershire. It is the first complete vessel of its kind to be found in the Cotswolds, and it is to be hoped that it will find a safe home in a public Museum. The barrow in which it was discovered was one of the many placed upon the map during the last Ordnance Survey revision. (*The Times*, 29 August, p. 8).



Two articles by Mr S. E. Winbolt on the Roman coastguard forts in Yorkshire were printed in *The Times*, 23 August, p. 11 and 25 August, p. 13.



Roman glassware in considerable quantity has been found at Cologne, which was one of the principal centres for the manufacture of glass in the Roman Empire. Among the vessels are many with figurative decoration. (*The Times*, 22 August, p. 9).



Dr Hermann Junker, Director of the Austrian excavations on the Delta of the Nile at Merimda, between Wardan and Salamme, reports on a Neolithic settlement there. (*The Times*, 28 July, p. 11).



A report of Mrs M. E. Cunnington's paper describing the site of 'The Sanctuary', on Overton Hill, Wilts, which was read before the Wilts Archaeological Society, was published in *The Times*, 1 August, p. 11. We referred to the excavation in the September number of ANTIQUITY, p. 368.



In the recently issued yearbook of the Carnegie Institution of Washington for 1929, Dr Sylvanus G. Morley publishes his annual review of the activities of the Institution in excavation among the Maya ruins of Central America (summarized briefly in *Nature*, 27 September).

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A warship 500 years old has been found in the Riddarholm Canal in the heart of Stockholm. (*Hampshire Telegraph*, 15 August).

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Professor H. Otley Beyer, head of the Anthropological Department of the University of the Philippines, has collected important archaeological material during the last four years. In 1926 the construction of a dam on the Novaliches river brought to light a prehistoric village and cemetery which within the space of four months yielded some eighteen thousand specimens. During the next three years extended reconnaissance and excavation in the neighbourhood, mostly within the province of Rizal, brought to light nearly a hundred sites and an enormous amount of material, running into scores of thousands of objects.

Before these discoveries, the archaeology of the Philippines earlier than, say, a thousand years ago was a blank. Almost at a stroke it has been carried back at least to the early neolithic and possibly earlier. Although the material has still to be worked out in detail, certain broad conclusions are possible. These are summarized, and their bearing upon the prehistory of Eastern Asia indicated, by Prof. Roland B. Dixon in vol. 69, no. 4, of the *Proceedings* of the American Philosophical Society. (*Nature*, 20 September).

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The International Federation of Eugenic Organizations held a conference at the Larmer Tree Grounds, Tollard Royal, Wiltshire, 10-15 September. Eighteen countries maintain membership in the Federation, and many of them sent representatives. It was a good and a new idea to hold an international conference in the heart of a country district, instead of in some stuffy and overcrowded town. Its success was due to the untiring labours of Captain Pitt-Rivers and his staff, whose enthusiasm bids fair to revive the departed glories of the Chase as it was in the days of the redoubtable General.

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The Glasgow Herald (17 September) attaches 'world-wide importance' to the discovery on a sandstone rock near Glasgow of 'queer markings', which Mr Ludovic Mann regards as a 'register of astronomical episodes in the year 2983 B.C.' when there is said to have been a partial eclipse of the sun on 27 March at 3 p.m. There the matter rests at present.

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The excavation of the prehistoric site of Thermi, in Lesbos, was continued by Miss W. Lamb on behalf of the British School at Athens. (See ANTIQUITY, III, 484). The uppermost settlement has now been uncovered and planned with the exception of a particular area. It was protected by a wall from 1.2 to 2.4 metres thick, and contained, besides the narrow oblong houses typical of the site, at least two houses with semi-apsidal ends.

One section has been dug to virgin soil, and the large series of vases obtained from the different strata illustrate the development of shapes as well as of fabrics: these vases are hand made and closely allied to those of Troy I and IIA. The figurines, mostly of terracotta, are interesting owing to their variety of type. Copper or bronze, though never common, occurs at all levels, and a crucible found in one of the lowest strata shows that the metal was worked on the site.



The remains of ten cities have been found during the season's excavations of the joint expedition of the Pittsburgh Xenia Seminary and the American School of Oriental Research in Jerusalem, which has been working at Tel Beit Mursim, the ancient Kiriath Sefer, 13 miles southwest of Hebron. In the opinion of the Director, Professor M. G. Kyle, the work accomplished provides evidence for the definite chronology of important events in Biblical history. (*The Times*, 7 August, p. 9).



Mr Humfry Payne, Director of the British School at Athens, reports (*The Times*, 20 August, p. 13) on the early Greek vases and bronzes found during this summer on the site of the Heraeum of Perachora. A vast deposit of objects was discovered, the inscriptions proving it to be remains of Hera's treasure, and covering a period from 750 to 200 B.C. The best of the pottery is Protocorinthian, of the seventh century. 'One example of this kind is the lid of a box decorated with a scene of wild life: a hare escaping from a hound only to fall into the jaws of a lion, and above, parts of other animals. The lid gives some idea of the qualities of the vases of this style—action achieved by simple, but scarcely primitive, means, magnificent calligraphic stylizations of natural forms, and a technique perfectly suited to the matter in hand'. The bronze vases are made of thin sheets of metal and are not in good preservation, but the statuettes, cast solid, are in excellent condition.

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Mr D. Caclamanos, the Greek Minister in London, discusses in a letter to *The Times*, 21 August, p. 11, the announcement by Dr Kyparissis, the Greek archaeologist, of the discovery of the Fountain of the City of Odysseus. A reply by Prof. Wilhelm Dörpfeld, who hoped 'to prove that the news is not correct' is printed 12 September, p. 8. This in turn was answered by Mr Caclamanos on 23 September, p. 8.



Sir Rennell Rodd, M.P. contributes (*The Times*, 11 October, p. 13) an interesting report on the work of the British School at Athens at Ithaca this summer, which has been conducted by Mr W. A. Heurtley, the assistant director. The site at Pelicata has yielded results of historic value and it is hoped to continue excavation there next season.



The work of the Italian Scientific Expedition at the Mumbwa Caves in Northern Rhodesia is reported by Professor Raymond Dart in *The Times*, 22 August, p. 9. Some primitive smelting works were found. The foundry was 6 feet below the surface, and by it was a great accumulation of ash and an immense deposit of burnt rock, incinerated clay, bones, etc., and between the furnace and the cavern wall were numerous fragments of human burials. The claim is made that 'it has been possible to prove from the deposit that when the smelting was carried out the local inhabitants were Bushmen, and were at the lowest phase of the Late Stone Age'.



Some important pre-Christian discoveries are reported (*The Times*, 30 August, p. 11) from Trier, as the result of a Commission 'appointed to carry out researches in the Late-Roman Imperial Residence and Early-Christian bishopric of Trier'. Since 1928, 21 temples and 29 chapels have been uncovered. Among the finds is a remarkable life-size marble torso of Arduenna, the goddess who gave her name to the Ardennes and is identified with Diana; a representation in baked clay of Artio, the Celtic goddess of the Woods and Waters, in the form of a bull, headless, but otherwise complete with pediment; and a bronze winged-Mercury. It is suggested that the temples, with all their altars, idols and offerings were destroyed in A.D. 337.



A report on the work at Meare Lake village during the past season is printed in *The Times*, 11 September, p. 12.

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Mr J. D. S. Pendlebury, curator of the Museum at Knossos, has been appointed director of the Egypt Exploration Society's excavations at Tel-el-Amarnah. Work was begun in October. (*The Times*, 9 September).



As the result of further excavations at Caistor-by-Norwich, Professor Donald Atkinson has established that the Roman occupation continued until the last years of the fourth century, and possibly to the early years of the fifth. Coins as late as Honorius (395-423) have been found. (*The Times*, 10 September, p. 9).



Recent finds at Vinča, a village about 15 miles below Belgrade, on the Danube, were described by Professor Vassič at the meeting of the British Association at Bristol in September. Professor Vassič draws the inference that they prove the spread of the Aegean civilization of about 1400 B.C. to the valley of the Danube, probably by way of the Black Sea. The excavations have been assisted by Sir Charles Hyde. (*The Times*, 13 September, p. 9).



Urns of the Bronze Age have been found at Brown Candover, north of Alresford, Hants. They are described by Mr S.E. Winbolt (*The Times*, 16 September), who also records in the same paper, 1 October, some burial-mounds near Hinton Ampner, which he has excavated.



The present position as regards archaeological exploration in Persia is stated in *The Times*, 7 August, p. 9. The Government has intimated that it desires to assume control over all future research-work in Persia but though this was intimated to the French Government in 1928 nothing has yet been done. In view of the great interest of Persian archaeology it is to be hoped that regulations will be drawn up and passed into law at once.



On p. 315 of the September number, line 9, reference was made to 'Caesar'. This should have been otherwise worded. The person in question was not, of course, Julius Caesar, but Germanicus. We are indebted to one of our readers in Germany for drawing our attention to the slip. Another correction is that of *pictographs* for 'photographs' on p. 382, line 14, of the same number.

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One of our many readers in South Africa has sent us a cutting from *The Daily Dispatch* of East London, 23 August, which raises the question whether there is in southwest Africa or Bechuanaland the remains of a lost city much greater in extent than Zimbabwe. The site is said to be on the banks of a tributary of the Nosob river and south of Gobabis. The walls are built of stone and are more imposing and in better state of preservation than those of Zimbabwe.



The German excavations at Warka (Erech or Uruk) directed by Dr Julius Jordan on behalf of the *Notgemeinschaft der deutschen Wissenschaft*, have already been briefly described in *ANTIQUITY* (IV, 109-111). Preliminary accounts of the first two seasons' work (1928-9, 1929-30) are published in heft 13 of *Deutsche Forschung*, pp. 137-172, with plans and illustrations. This publication can be obtained from Karl Siegismund, Berlin, price 8 marks.



Reports on the excavations at Colchester during the summer, and an account of the principal objects found, have been printed in *The Times* of 4 and 9 August and 23 October. Particulars as to the general direction of the work and the appeal for funds were given in *ANTIQUITY* for September, pp. 362-4.



In *The Listener* (published by the B.B.C.) for 29 October 1930, there is an illustrated and comprehensive article by Mr S. E. Winbolt on 'Archaeology in Great Britain, 1930', in which the various excavations which have been in progress and the discoveries and finds made during the year are recorded.



A replica of the bronze statue of Zeus dredged up near Artemision, Euboea, which is referred to on page 412 of the article by M. Merlin in the present number of *ANTIQUITY*, and illustrated on plate I, has been presented to the Ashmolean Museum by Sir Arthur Evans.



The important discoveries made on the site of Verulamium (St. Albans) are described by Dr R. E. Mortimer Wheeler in *The Times*, 8 November, pp. 13-14.

Some Recent Articles

This list is not exhaustive but may be found convenient as a record of papers on subjects which are within the scope of ANTIQUITY. Books are occasionally included.

Roman Britain in 1929, by M. V. Taylor and R. G. Collingwood. *Journal of Roman Studies*, 1929, XIX, 180-218.

This valuable schedule of discoveries is an annual publication, and should be consulted by all interested in Roman Britain. It is published in the *Journal of the Society* which, though not confined (as we rather wish it were) to Britain, is the natural outlet for such reports.

Fibules grecques et orientales, by Chr. Blinkenberg. *Kgl. Danske Videnskabernes selskab. Hist.-filol., Meddelser*, 1926, XIII, ; reference in *ESA*. v, 151.

Recent discoveries of Fossil Man, by Sir Arthur Keith. Supplement to *Nature*, 21 June 1930, pp. 935-42.

The Metallography of some ancient Egyptian implements, by Sir Harold Carpenter and Dr J. M. Robertson. *Nature*, 7 June 1930, pp. 859-62.

Excavations in Whitehawk neolithic camp, near Brighton, by R. P. Ross Williamson. *Sussex Arch. Collns.*, 1930, LXXI, 57-96.

So far as the author and excavator is concerned this is an excellent account of a useful piece of work well carried out. Concentric neolithic camps are still new enough to deserve full treatment. The paper suffers from bad editing, however, for which the writer cannot be responsible. The air-photograph is blurred because it is printed on unsuitable paper, and the line-drawings of pottery—beautifully executed—have been spoilt by over-reduction and irregular reduction. Hardly any are reduced to the same scale. This spoils the effect and greatly hampers comparisons.

Royal Archaeological Institute of Great Britain and Ireland. Descriptive Programme of the Summer Meeting, 1930, at Bath. pp. 64.

This admirable handbook contains no less than 32 plans of towns, castles, abbeys and prehistoric sites within easy reach of Bath. Many of them are published for the first time and the book will have permanent value. The brief but adequate descriptions are by experts, and give succinctly the information that should be needed by a visitor. A feature of the book is the splendid coloured plan (1 : 1800) of Glastonbury abbey.

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The Pliocene and Pleistocene deposits of Wadi Qena and of the Nile Valley between Luxor and Assiut (Qau), by K. S. Sandford. *Quart. Journ. Geol. Soc.* 1929, LXXXV, 493-548.

Hausurnen oder Speicherurnen? by Franz Oelmann. *Bonner Jahrbucher*, heft 134, 1930, pp. 39.

A scholarly consideration of the problem of hut-urns, conducted along sound anthropological lines, and well and fully illustrated.

Mohenjo-daro, a city of 5000 years ago, by Dorothy Mackay. Printed for the Indian State Railways (Publicity Department) by the Times of India Press, Bombay. pp. 12, maps, illustrations.

Intending visitors to India cannot do better than obtain beforehand this useful little guide by the wife of the excavator. The address at which it is to be obtained is Publicity Dept., 26 Alipore Rd., Delhi. In default of the still-awaited official report it is the best—and only—reliable general account of these epoch-making finds.

Chettle Down Earthwork: an ancient pond, by H. S. Toms. *Proc. Dorset N. H. and Arch. Soc.* 1930, LI, 194-203.

The Romance of Archaeology, by R. V. D. Magoffin and Emily C. Davis. *G. Bell and Sons*, 1930, pp. 348, numerous illustrations. 18s.

This is an unnecessary book; but it is worse than that—it conveys a wholly wrong impression of what archaeology is. The style is commonplace and occasionally lapses into vulgarity, especially in the titles of illustrations.

The Origin of the Mycenae Tombs, by Stanley Casson. *Art and Archaeology*, Sept. 1930, xxx, 81-5.

A topical note on a controversial matter which is rapidly becoming settled—the relative dates of the shaft-graves and tholos-tombs; with remarks on the recently found tholos-tomb of Midea.

Die Schachtgräber von Mykenai, by Georg Karo. Verlag F. Bruckmann, München. 120 marks. [To be reviewed later].

Exposé de titres et bibliographie, by Henri Breuil. Emmanuel Grevin, Imprimerie de Lagny, 1929.

The Abbé's bibliography—a formidable one and a most useful brochure which not only students of palaeolithic archaeology will find invaluable for reference.

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Savernake Forest, by H. C. Brentnall. *Marlborough College Nat. Hist. Report*, no. 78, pp. 75-96, with sketch-map.

A useful and scholarly guide, containing information based on original research and not published elsewhere. The section dealing with the bounds of the medieval forest is particularly welcome.

Ancient stone monuments near Lough Swilly, co. Donegal, by Vice-Admiral Boyle Somerville. *Journ. R. Soc. Ant. Ireland*. December 1929, LIX, 149-75.

Those who accept certain ideas about orientation and those who do not will both alike welcome this paper, if only on account of the writer's careful plans of the monuments dealt with.

The Curraghcrowby Souterrain, Ballineen, co. Cork, by Vice-Admiral Boyle Somerville. *Cork Hist. and Arch. Journ.* Jan.-June 1930.

Studien zur älteren bremischen Kartographie, II^{er} teil, by Hans Dörries. *Bremischer Jahrbuch*, 32, 1929, 243-70.

Valuable for the history of cartography in Germany.

Zur Keltenfrage, by Pedro Bosch-Gimpera and Georg Kraft. *Mannus*, VI^{er} Ergänzungsband, 1928, 258-70. [Sonderdruck aus der Festgabe für den 70 jährigen Gustaf Kossinna].

La relazioni mediterranee postmicenee ed il problema etrusco, by Pedro Bosch-Gimpera. *Studi Etruschi*, vol. III, 1929. pp. 41, 2 maps, 4 plates.

An important contribution to a difficult problem, and specially welcome as treating it from the western Mediterranean standpoint.

Die sächsischen Fenstergefäße der Völkerwanderungszeit, by Fritz Roeder. XVIII *Bericht der Röm.-Germ. Komm.* 1928, 149-87.

Deals largely with England. The illustrations are none too good ; and some are quite repulsively bad.

Urquhart Castle, by W. Douglas Simpson. 1930. pp. 31.

Bulletin of the Museum, Valletta, Malta. Vol. I, no. 1, December 1929.

We welcome this Bulletin, but we wish it were possible to obtain better printing and illustrations.

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The alleged palaeolithic implements of Sligo: a summary, by J. K. Charlesworth and R. A. S. Macalister. *Proc. R. Irish Acad.*, 1930, xxxix, 18-32.

Early cultures of Atlantic Europe, by C. Daryll Forde. *American Anthropologist*, Jan.-March 1930, xxxii, 21-100.

The megalithic culture-sequence in Iberia, by C. Daryll Forde. *Annals of Archaeology and Anthropology*, 1929, xvi, 37-46.

On the use of greenstone (jadeite, callais, etc.) in the megalithic culture of Brittany, by C. Daryll Forde. *Journ. R. Anthr. Inst.*, 1930, lx, 211-34.

The Bronze Age in West Yorkshire, by Dr A. Raistrick. *Journ. Yorks. Arch. Soc.*, 1929, pp. 354-65, offprint from vol. xxix.

A very useful piece of topographical archaeology—would there were more! Fully illustrated by maps and plans.

Land movements in Scotland in prehistoric and recent times, by J. Graham Callander. *Proc. Soc. Ant. Scotland*, 1928-9, lxiii, 314-22.

The Early Colonization of North-eastern Scotland, by Professor V. G. Childe. *Proc. Roy. Soc. Edinburgh*, 1929-30, l, 51-78.

On the oldest domestic animal and its significance for Palethnology, by A. E. van Giffen. *Kon. Akad. van Wetenschapen te Amsterdam, Proceedings*, 1929, xxxii.

A technical study of skeletal remains of dogs from the Dutch *Terpen*.

A catalogue of the maps in the Bedfordshire County muniments [by G. Herbert Fowler]. 1930. pp. 47.

The only existing catalogue of the old manuscript estate-maps of a county. These are far more valuable to the student (being cadastral and on a large scale) than the small scale county maps usually listed by bibliographers.

Transactions of the Newbury District Field Club, 1930, vol. vi, no. 1, pp. 47. (On sale at Newbury Museum, 2s.)

This is a welcome sign of life—after 19 years' silence! It contains a valuable paper by Mr W. E. Harris who watches so devotedly over the Thatcham area (probably *Spinae*, though the name has, if so, shifted slightly westward in subsequent times).

The law and practice of Treasure Trove, by G. F. Hill. *Antiquaries Journ.* 1930, x, 228-241.

We recommend all concerned to read this important summary.

Reviews

ANGLO-SAXON WILLS. *Edited with translation and notes by* DOROTHY WHITELOCK, M.A. *Cambridge Studies in English Legal History. Cambridge University Press. 1930. pp. XLVII, 244. 15s.*

Most of the material for the history of pre-Conquest England has been in print for many years. It has long been recognized however that the editions for which even great scholars such as Kemble, Birch, Thorpe and Plummer were responsible are no longer adequate for all the purposes of modern historical research. The re-editing of the many texts relating to early English history is the task which the present generation of scholars has before it, and as yet comparatively little has been done. Miss Whitelock's edition of thirty-nine Anglo-Saxon wills belonging to the period *c.* 950 to *c.* 1066 is a welcome step forward. All the wills have been printed before, some many times, but Miss Whitelock supplies her readers with a set of more accurate texts (whenever possible she has consulted the MSS.) with parallel translations and over 100 pages of useful notes. Unfortunately however, and particularly so since no one is likely to edit a volume of Anglo-Saxon wills for many a day, she has excluded certain wills (including that of King Alfred) because they have been edited adequately elsewhere. The convenience of having all the texts in one volume is very great, and the cost of a few extra pages generally much over-estimated. A 'General Preface' (34 pages) is contributed by Professor Hazeltine, who discusses with great learning most of the difficult problems to which these 'wills' give rise, and his brilliant essay forms an indispensable supplement to the section on the Last Will in Pollock and Maitland's *History of English Law*.

The documents generally spoken of as Anglo-Saxon wills are, as was recognized by Pollock and Maitland, not true wills but rather the predecessors of the will. The true will is a written disposition (signed in the presence of witnesses) of a person's property to take effect after death; it is revocable, appoints executors, and possesses the quality of ambulatoriness, *i.e.*, disposes not only of the property which the testator has when he makes the will but also that which he may acquire between that time and his death. No single Anglo-Saxon will possesses all these characteristics though it may possess the germ of one or more features of the later will. It is known that King Alfred revoked an earlier will, but this was exceptional; the Anglo-Saxon will was an irrevocable post-obit donation. Sometimes (*e.g.*, Theodred, bishop of London, in no. 1 of this volume), but rarely, the testator pronounces his will concerning his property which he has acquired and may yet acquire. The predecessors of the later executors are to be seen in the persons appointed as 'guardians' of the will (*e.g.*, no. IV, will of Ælfsige, bishop of Winchester, 'Then I pray you, my dear friend Ælfheah, that [you] will watch both over the estates and those who are my kinsmen, and that you will never permit anyone to alter this in any way'), or the king, when the will is made, as frequently happens, with his specific consent. The testator very often makes gifts to the king that his will may 'stand'.

Professor Hazeltine emphasizes the fact that the written will, the *cwide*, is not dispositive but evidential, it is not the real will but evidence that the will has been made.

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The real will is an oral statement made in the presence of witnesses. The orality of the will is proved not only by the facts that the term *cwide* means speech and that the documents are in the vernacular, but also by a number of passages in the wills themselves to which attention is drawn. The oral will made in the presence of witnesses and accompanied by certain formalities was of recognized validity; it might be pronounced by the testator on his death-bed or when he was in good health. It was (sometimes) committed to writing lest the spoken word should be forgotten. The oral will is Germanic in origin, but the practice of recording it in writing is due to ecclesiastical influence—churchmen, as a rule the greatest beneficiaries under these wills, desired the written record for security, but ecclesiastical legal doctrine and native custom alike recognized the validity of the oral transaction, and churchmen demanded no more than evidence-documents. ‘The oral will was not an exotic in England; it was native to the Germanic custom of the Anglo-Saxon period of our legal history. The writing, exotic in every sense, was simply a new and better form of testimony’. Further, the Anglo-Saxon will not only confirms previously made spoken contracts (*e.g.*, between the testator and his relatives as regards the succession to portions of his estate), but also, in many instances, is itself an irrevocable contract which will take effect after the testator’s death. The discussion of this aspect of the will is one of the most valuable contributions made by Professor Hazeltine’s preface for it has not hitherto received adequate attention. The language of some of the wills indicates that they are records of oral contracts, *e.g.*, no. xxxix :—‘This is the *agreement* which Ulf and his wife Madselin made with [God] and with St. Peter when they went to Jerusalem’. The view that the oral will was a contractual agreement is borne out by the practice of drawing up the written will in duplicate or triplicate in the form of a chirograph, one part as a rule being kept by the donor himself and the others given to the principal donees or to the care of some disinterested authority. The beneficiary no less than the ‘testator’ is bound by an agreement—for example, a testator binds himself to give certain lands to a church after his death, the church is the promisee but it is also promisor inasmuch as it is bound by the contract to bury the benefactor and pray for his soul. This two-fold conception of the gift is characteristic not only of the Anglo-Saxon but also of other Germanic legal systems. The Anglo-Saxon will is obviously connected very closely with the land-book, and Professor Hazeltine discusses certain aspects of the latter (p. xxxi, *seq.*) giving his support to the view that the land-book no less than the will, was an evidentiary and not a dispositive document between which and the Anglo-Norman charter (the evidentiary character of which is well recognized) there is a direct connexion. In two (nos. xxiii and xxix) of these wills the influence of the writ on the form of the written will is evident both in the greeting at the beginning and the valediction at the end.

All the Anglo-Saxon wills which have come down to us are those of persons of high rank or very considerable wealth—ethelings, ealdormen, bishops and other great personages. Of the 39 in this volume ten are the wills of women and four the joint wills of man and wife. Miss Whitelock in her notes gives all the information which she has been able to gather concerning the testators and persons mentioned in the wills. The properties disposed of are not only lands but also a great variety of chattels ranging from farm-stock to ecclesiastical ornaments and domestic articles such as cups and tapestries. There is much here to illustrate the social aspect of Old English history, while occasionally light is thrown on the position of certain classes of persons—*e.g.*, Wynflaed (no. iii) grants to the nuns of Shaftesbury not only bondmen but also the *geburs* on one of her estates. Clauses enjoining the liberation of slaves are very common

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in the wills. Two episcopal wills (nos. I and xxvi) have a direct bearing on the ecclesiastical organization of East Anglia. The will of Theodred, bishop of London, c. 942-c. 951, raises a somewhat important question. Miss Whitelock thinks that Theodred's reference to his see at Hoxne shows that he was also bishop of Suffolk' but she rightly translates *biscopriche* in this document as episcopal property (see note p. 103). The possession of property in Hoxne in Suffolk, even though Domesday (II, fo. 379) states that 'In hoc manerio erat ecclesia sedes episcopatus de Sudfolc t.r.e.', does not necessarily imply that he was bishop of the diocese. That the Danes and English of East Anglia had a bishop or bishops soon after the acceptance of Christianity by the former follows from the language of the edict known as 'Edward and Guthrum,' though their names have not come down to us. It may be that the whole of East Anglia or perhaps the southern portion only (the ancient diocese of Dunwich) was placed under the jurisdiction of the bishop of London. The problem needs further consideration. Ælfric, bishop of Elmham (d. 1038) makes bequests to the priests at Elmham and the priests at Hoxne (p. 72). This, taken in conjunction with the passage in Domesday quoted above, shows that though there was but one see in East Anglia from the early or middle tenth century onwards, the extinct bishopric of Dunwich did not wholly lose its identity. In East-Anglia, at least until 1066, as in the medieval bishoprics of Bath and Wells and Coventry-Lichfield-Chester, there was more than one episcopal seat.

Miss Whitelock's book, owing much to the published work and the generously acknowledged help of other scholars, is a credit to all concerned in its production. It is to be hoped that the series, of which this is the fifth and so far the most interesting volume, will be continued and that editors equal in scholarship and industry to Miss Whitelock will be forthcoming. The sale of such books must necessarily be limited, but one may urge that neither the binding nor the paper justifies the price, which is certainly high.

R. R. DARLINGTON.

GREEK VASES IN POLAND. By J. D. BEAZLEY, *Lincoln Professor of Classical Archaeology in the University of Oxford*. Clarendon Press, 1928. pp. xvi, 88, with 32 photographic plates. 42s.

As Professor Beazley says in his preface, 'the study of Greek vases is a different thing to what it was fifty years ago'. It might be added that the cataloguing of Greek vases is a different thing, since Professor Beazley took to describing them. On the relation between the material arts and literary description much has been written since Lessing's *Laocoon* and before it; but on the art of cataloguing there are few treatises yet. Is the ideal catalogue of works of art an affair of serial numbers, dimensions, find-spots, and former ownerships; of 'Athena and Thesus, confronted' like heraldic beasts on an escutcheon; of occasional thrills such as 'hopelessly repainted', 'inscription illegible', 'in parts not certainly ancient'? Or does it extend to us the 'extreme kindness and perfect hospitality' of a Polish prince, with his learned and eloquent guest to make us at home among his lovely possessions? It is not that the vast preliminary labour of many hands goes unacknowledged here, in ample footnotes; nor our guide's own world-wide exploration of the haunts of Greek vases, and unfailing memory for their details of technique and style. But these are here means to an end, that 'instruction and delight', which a great collector and patron of collectors willed that his treasures should bring to his countrymen. We have only to compare the text of this volume with its beautiful illustrations, to realize what the study of Greek vases has now come to be,

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for one of its most eminent exponents. Hardly a stroke of the brush is without its significance, its contribution to that cumulative, let us hope unending, study, no less than to our enjoyment now.

And what we are called to enjoy is twofold at least. In this year of the Italian Exhibition, the quaint jargon of the connoisseur means more for many of us than heretofore. Douris and Brygos, Epiktetos and Myson, we know; the 'Achilles painter' perhaps; but what of the 'painter of the Munich cup', the 'Providence painter', the 'Tymbos painter', the 'Washing painter' and him 'whom I have called the Boot painter because he likes to draw women busied with their boots' (p. 37), and whose females are 'slightly froggish' in spite of their descent from those of the 'Kleophrades painter'? What they respectively stood for, in that amazing efflorescence of draughtsmanship, we learn, as Professor Beazley himself has learned, by examples rather than by precepts. But here and there a body of doctrine looms up; one begins to see the wood among the trees. 'Side by side with the art of the Penthesilea painter and the Sotades painter—a realistic art with a certain scorn of perfect finish—a very different art flourished in the seventies' (it is the fifth century that is in question)—'a subdued refined art with a polished technique. We can trace its history backward and forward: the originator of it is Douris; the Copenhagen painter and the Syriskos painter apply it to the decoration of big vases; and it leads on to the classical art of the Villa Giulia painter and the Euaion painter in the sixties to forties'. Thus much, to explain one whose 'Aphrodite in the British Museum might be called the earliest of all Greek classical works, in Wölfflin's sense of the word classical; and that implies a breadth, and a strain of majesty, which in the academic group are never found. What does the academic group offer instead? Think of the masterpieces of the style' (in a little cataract of examples), 'pure, perfect, floral line; and expression attained without the melodious contour being disturbed . . .'. Or again (p. 75), of an Apulian vase 'in the so-called Gnathian technique: a pair of incised wreaths, and between them, in white, with brown details, a ravishing little figure of a muffled dancer . . . What a relief, after looking at late Apulian mascheronekraters, or even thinking about them. More than three hundred years later, the same contrast in the same quarter of the world: when one turns from the elaborate Pompeian "histories" to the elfin dancers and tight-rope walkers of the Villa of Cicero, or to a few perfect brush-strokes representing a wine cup, or an apple, or a glass'. But there can be blame as well as appreciation; as (p. 77) 'of a class of vases, chiefly neck-amphorae, made by barbarians, probably somewhere in Campania, in the latter part of the fifth century. The glaze is good, and the shapes laudable; all is well when the painter restricts himself to a narrow band of pattern round the vase and a little device in silhouette under each handle—a leaf, or bird, or deer, or such human faces as glower coldly at one from Norman corbels: but he prefers drawing large figures in the Greek manner, and his figurework is marvellously crude, or again (p. 71) 'The Cracow vase is in the regular "fat-boy" style; the other is less distressing'. So potter after potter is brought back from beyond to be judged according to their works; 'this bourgeois painter with his earthbound people and his absurd interest in furniture' (p. 38); the 'humble but light-hearted contemporary' of the late archaic artists (p. 6); the 'excellent sober style' of the 'Providence painter'; the 'strong wiry relief-lines which do much to redeem the figures from oversweetness' of the 'Eretria painter', to whom also the whole 'Lemnos group of cups' is now happily assigned, or (p. 73) the 'beautiful motives—academized by a drawing master, but never quite bereft of their original brightness'. And the modern draughtsman stands at the same bar: 'The grandeur of the figures is so great that it

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survives translation into the idiom of Housselin, who has here done himself full justice. He has coarsened every black line, omitted all the red lines, and all the fine brown detail on the bodies and the clothes, and obscured the restorations'. Elsewhere, however, the same luckless one 'omits the finer detail, and is careful to insert the modern restorations'.

But that is only half the story of these paintings. Many of the subjects of them are commonplace episodes of an inexhaustible mythology; as for example (p. 30) where Athena 'dressed most simply . . . looks towards Hermes . . . A slight work, but there is a certain charm in the loose-limbed stance of the girl goddess, in the grave bend of her large-eyed head, and in the respectful bearing of the messenger god', though what he came to say, who shall tell? A few, less obvious, raise puzzling problems of identification. But most of those, at all events, which Professor Beazley selects for interpretation, are glimpses of the daily life of the time. To recognize these, however, is not given to everyone. For example, in the lovely scene of worship on plate 23, 'a scene from ordinary life has been translated into a higher key. The priestess and her companions making preparations for the festival of Dionysos; the wine jars filled and placed ready, the lyres taken down from the pegs in the store room. The priestess is the mother of a little boy. A shame to leave him at home all day: her sister will bring him and look after him. She has brought him; he sees his mother, she turns to him in the midst of the stir and the splendour, and he will remember that moment his whole life through. That is the foundation of the picture' (p. 52), but in the 'transformation' so subtly indicated 'the little boy has been changed, and has become a little satyr', as wise men of old detected, but failed to explain. Here is a sample of the 'Washing painter's' art: 'two women have come to the fountain to fetch water, but they are not in a hurry, and so they sit down, using their water-pots as seats, and apply themselves to a game of flashfinger' as popular with the ancients as in the south to-day—'a third woman holds a wreath for the victor, and Eros is also there, not for any special reason, but because, in the language of Jahn, "he is the constant companion of youth and grace"'. But as Professor Beazley adds, 'the subject has been often discussed', and it is hardly to be expected that others, less content with just what the 'Washing painter' has told us, will forego the hunt for the 'special reason' why Eros passed that way just then, and what depended on this trial of skill. Or is it that in this, as in another instance (p. 2) 'the artist, like a revue-producer, has scrapped his plot, and replaced the tritagonists by a gang of supers'? For longer flights of interpretation, such as the initiation-scene (pp. 41-43) and the Dance of the Islands (pp. 62-64) where by a delightful refinement 'one or two of the figures are dancing, and the rest dancing along'—reference must be made to the book itself. Occasionally we may venture a doubt on a supplement. Is the meditative youth in plate 8.1 quite as sober as the description (p. 23) appears to suggest?; though truly 'no two persons walk alike'; but the rest of the people on this vase 'seem in pretty good form'. And in plate 17.2, is not the maid on the left looking back into her mistress' mirror; seeing there the quizzical face of the lady, who, for her own part, studies at ease the veteran lover ogling her from behind her chair?

It is a pity that in this last, and in several others, of the skilful photographs, the high-lights, so difficult to exorcise on such smooth surfaces, obscure important parts of the design. But what is hard to attain in a museum studio becomes almost impracticable in a private collection; and many of these pictures are indeed wonderful. Some day perhaps, we shall have television, and survey the *Corpus Vasorum* in the originals. Till then, we may well be content with such vivid 'penmanship of the line', to pervert one of the writer's own phrases, as is given us here.

J. L. MYRES.

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THE ATHENIAN CALENDAR IN THE FIFTH CENTURY. By BENJAMIN DEAN MERRITT. *Published for the American School of Classical Studies at Athens. Harvard University Press, 1928. pp. viii, 138.*

This book presents a remarkable piece of historical reconstruction, by a combination of archaeological, financial, and astronomical evidence, which illustrates the dependence of scientific history on such co-operation of other branches of knowledge.

The Peloponnesian War broke out in the spring of 432 B.C. Athens engaged in it with large annual revenues including payments from tributaries in the old Delian League; a considerable surplus in hand; and in reserve the accumulated wealth of the patron-goddess Athena, and the other deities who had temples on Athenian soil. But the war outlay was heavy, and these reserves were gradually depleted, till in the Attic year 425-4 B.C. 'on the third day of the fourth prytany' it was proposed to double the Delian tribute. Borrowing, however, continued, and when the Peace of Nicias was being arranged in 422 B.C., one of the first things to be done was to provide for the repayment of the loans from Athena and the 'Other Gods', together with interest, the amount of which depended, of course, on the date from which each instalment had been drawn out. The record of these transactions, for the years 426-422 was published, according to custom, on a single marble slab on the Acropolis.

Of this inscription, three large fragments, and several smaller ones were recovered long ago, and have been the subject of much study and discussion. Recently other small fragments were found during the American Schools' excavation of the Erechtheum, making fifteen pieces in all. They are published in *Inscriptiones Graecae* 1², 324 and 306. Thanks to a few remnants of original margin, and junctions between edges, the relative position of the principal fragments in the original slab is now practically certain. Parts of, at least, 122 lines are preserved; and the importance of the new fragments is that, small and discontinuous as they are, they serve to connect the upper and the lower halves of the inscription and give a general notion of the contents of the devastated area. They also necessitate readjustment of the positions previously assigned to other pieces, and this in turn necessitates re-interpretation and supplement in the vacant intervals.

In any such reconstruction, two main problems have always had to be kept in view; the purpose of the several payments, and the date at which each was made. The solutions of these problems are interdependent, for the amounts of interest payable depends on the duration of the loan. How were these reckoned? From one quadrennial Panathenaic festival to the next, in days; or by the months and days of the civil calendar; or by the prytanies or sessions of the tribal sub-committees of the council, whose minutes were the authority for the transaction. All three reckonings occur in this inscription, and their bewildering combinations show both that there was some reason for combining them, and also that there was need for that simplification of the Attic calendar which is known to have been affected in the general re-conditioning of Athens after the long war was lost.

That the rate of interest was uniformly one drachma a day on five talents was established by Kubicki in 1885. Wherever, therefore, the amounts of interest and of capital are known, the interval in days between the beginning and end of the loan is known also. From these data Dr Merritt has been able to satisfy himself (p. 16) that the loans were reckoned to the last day of the council's year, reckoned in prytanies, not of the civil year, nor of the Panathenaic year, by which the creditors, namely the stewards of Athena and the 'Other Gods' kept their own accounts, as this inscription agrees in testifying. As these years were differently calculated, and never coincided exactly, payments made by the council at the end of its financial year might be found as receipts in the

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Other Gods' accounts early in the next; but this caused no more practical inconvenience than does the present procedure of the University of Oxford, which closes its accounts in July, in respect of grants from the Treasury, whose financial year begins on the fifth of April, and of the bills of its tradesmen who close their accounts on December 31.

An immediate result of these calculations (p. 19) is inconsistent with Keil's reckoning of the correspondence between the civil year and the council's, on the basis of which many important dates in Greek history have been accepted. Consequently, Dr Merritt's memoir not only includes chapters on the epigraphic aspect of the new fragments, but on the methods of reckoning interest, on which Keil 'hatte den Standpunkt der Resignation gewonnen' (p. 31), and on the actual totals of loans from Athena Polias, Athena Nike—as King Charles levied contributions both from Christ Church and from Jesus College—as well as from the Other Gods, which add significant details to the chronological argument also. It contains also the application of the new data about the working of the Athenian calendar in the years from 426-422 B.C. to earlier and later periods. For example, Aristotle in his *Athenian Constitution* (ch. 32.1) says that in 411 B.C. the new council was due to enter office on the fourteenth day of the month Skirophorion, from which, working backwards *secundum artem*, he is able to equate the first day of the first prytany of the council of 422-21 with the tenth day of the month Hecatombaion in that year; which sufficiently illustrates the way in which the two reckonings diverged, so that from time to time intercalation was necessary, on a far larger scale than we tolerate with our own leap-years. A similar point of departure exists for the year 433 B.C., and from these and the inscription under review it can be shown which were the ordinary years, and which had intercalary months. The eclipse of October 9, 425 B.C., which occurred in the month Boedromion, permits us to correlate the Attic calendar with the Julian, and the comet of 427-6 which appeared during the month of Gamelion and close to the winter solstice, confirms the position of the ordinary and intercalary years (p. 93); and the recorded payments of wages in connexion with the building of the Erechtheum establish the varying lengths of the prytanies, and their independence of the length of the civil year.

A further point, which has caused much perplexity, concerns the discordance between the Attic civil year in this period, and the actual lunar cycle. The man in the street, and in Aristophanes' jesting reference, the gods also, had their grievances about it; the inscription *I.G.*¹ 76 instructs 'the new archon to intercalate the month Hecatombaion' in 422-21 B.C.; there are other difficulties (for example, in Thucydides' dates for events in the Peloponnesian War) which are relieved when account is taken of Dr Merritt's assignments. That the 'council's year' at Athens was so composed that it averaged $365\frac{1}{4}$ days, and consequently corresponded with the actual solar year, is indeed a conclusion of great importance; as it appears also that it began one week after the actual summer solstice, it becomes possible to assign any event of which the place is recorded in the 'council's year' to its approximate date in the Julian calendar, without the intermediation of the civil year with its intercalary months. Later, and probably in the earlier half of the fourth century, the 'council's year' and the civil year were made of equal length, as Aristotle knew (*Constitution of Athens* 43.2): and Dr Merritt gives good reason for supposing that this, like so much else that distinguishes the later Athens from the older, belongs to the great re-conditioning of Athenian institutions after the 'year of anarchy' 404-3 B.C.

There is an excellent index and bibliography. The plates give the actual condition of the fragments, and the full text so far as it can be reconstituted at present.

J. L. MYRES.

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THE NEGRO IN GREEK AND ROMAN CIVILIZATION; a study of the Ethiopian type. By GRACE HADLEY BEARDSLEY, PH.D. *Baltimore and London* (Milford), 1929. (*Johns Hopkins University Studies in Archaeology* no. 4) pp. XII, 145, with 24 figures. 16s.

Representations of negro types in Greek and Roman art are so common that even this monograph publishes only a selection of 289 numbers. The types vary greatly, even if we do not reckon as 'Ethiopian' the fine bronze head (no. 156) from Cyrene, in the British Museum (which may portray a Libyan but certainly is not negroid) or the late Roman portrait no. 289 which is at best half-caste, and may not be 'Ethiopian' at all: it was found in the Thyreatis, in eastern Peloponnese. By 'Ethiopian' however, Dr Beardsley means only what a Greek meant by *Aithiops*, and that was something vague enough; as she says, it 'closely parallels the modern use of negro', and there is no evidence that Homeric *Aithiopes* were either black or negroid. Hesiod (*Works and Days* 527) knew of 'blue' men, who lived where the sun goes in winter, and Minnemos (Diehl 10) thought Memnon's Ethiopians lived where the sun's chariot rested till dawn: somewhere 'back of beyond'. The Minoan Aegean, however, had its negro figure-of-fun, and black troops. The theory that black skin resulted from sunburn may be implicit in the name *Aithiops*, and is explicit in Euripides (Nauck, fr. 771): the sun smites the swarthy folk as he rises. A special problem is set by Memnon and Andromeda; were they black, or whites ruling black subjects? Another is the Busiris story as told on Attic vases (fig. 1, no. 7); here the king of Egypt is white but ill-favoured; some of his people full blooded negroes, though it was in Egypt that Heracles encountered them.

Why did negro types attract classical artists in this queer way? Were they legendary Ethiopians, or prophylactic charms, or merely studies of slaves, or 'the product of a joyous, almost child-like, interest in a new race'. To stress the 'comic' aspect of the negro as the white man sees him and his real sense of humour, partly explains his prophylactic utility; if you can make the devil laugh, he cannot harm you. The contrasted masks of Ethiopian and Asiatic point to a more serious appreciation of ethnic diversity.

Unfortunately, Dr Beardsley does not carry the study of negroid types far enough to throw any light on the sources even of the principal varieties. This would indeed be a fascinating study, and might throw some light on the corresponding problem, what were the racial elements in the Greek people which determined the selection of the principal 'Greek types' of white beauty?; for these too are diverse. Were Greek girls as like the white lady on fig. 6, as the black lady, back to back with her, is like a negress?: compare the negress on fig. 7, which has unmistakably Hercules on the other side.

The plastic vases with negro and crocodile raise another point. Where in the world could a Greek potter see a crocodile, so as to model it so vigorously. Had Sotades and his fellows travelled in Egypt? or did crocodiles come overseas with the faience and scarabs and other Egyptian bric-à-brac; And similarly, how common were 'Ethiopian' slaves in Greece in the fifth or fourth centuries? There is certainly one on the vase no. 124, black and turbaned, and on no. 125.

It will be seen that there is here much queer material, carefully set forth, and occasion for quite a number of minor studies in a bypath at the same time social and ethnological.

J. L. MYRES.

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EXPLORATIONS IN HITTITE ASIA MINOR, 1929. By H. H. VON DER OSTEN.
University of Chicago Press. Oriental Institute Communications, no. 8. 1930.
pp. 196, 163 illustrations and 9 maps. 9s.

After reading a former communication by the same author on the same subject, one would not expect to find much interest in another. That the author enjoyed his trip, and that he passed through some most interesting country, is evident from a cursory glance at his report. A more careful reading of it quite fails to reveal any gain to the study of Hittite archaeology. It was no doubt a pleasure to the author to write this chatty account of his travels, but why should anyone publish it? The itinerary on pp. 178-181 shows that he started on 10 June 1929, and finished his journey on 19 July, that he made a second journey from 12-22 August, that he often motored 200 or 300 kilometres in a day, and that he seldom spent a whole day at any one place. No one will expect archaeological results of any value from 'explorations' conducted in this way. To take one instance: I noted that the 'explorer' went to Gürün, and I read his account in the hope of learning something as to the present state of the two inscriptions there. All I found, however, was that the party arrived after some difficulty, apparently late in the evening, that they were taken for bandits by the intelligent natives, and that they started off again 'very early the next morning'. But perhaps we should be thankful that they do not seem to have been aware of their opportunity. If they had taken a photograph of either inscription, it would have been an illegible snap-shot, and if they had made a squeeze they might have damaged the stone.

The illustrations in fact are on a level with the letterpress. In some cases one can, with a little goodwill, discover what they are meant to illustrate because the objects have been well reproduced by previous writers. In other cases they are quite worthless for study, or they show a piece of landscape which might be anywhere. One mound (the author is careful to call it always a *hüyük*) is very much like another, and has no interest unless we are shown its relation to the surrounding country or something distinctive about it. The 'Communication' might perhaps be regarded as a preliminary report to to be followed by a scientific account in the *Publications* of the Oriental Institute of Chicago. If so, the Publication is likely to be equally disappointing. Some Phrygian inscriptions (long known to exist) are mentioned on p. 159, with a reference to a previous Publication. I looked up the reference and found an 'illustration' of one of them on which no single letter was distinguishable, while as for the other, the 'explorer' had no time to do anything with it. Perhaps he had not done a sufficient number of kilometres in his automobile that day. Yet the relations of the Phrygians to the Hittites are as important as they are obscure.

One cannot help regretting so grievous a loss of opportunity, and the expenditure of so much money, time and energy for so little result. If the whole time had been spent on one of the many promising sites visited, discoveries might have been made which would have been welcomed by scholars with enthusiastic gratitude. But joy-rides in such a country do not make the work of subsequent explorers any easier. If you try to hustle the natives they will assuredly defeat you by blank inertia, and will remember the incident to the disadvantage of the next traveller—who may be a serious person.

In about 50 days spent in Hittite country the explorer travelled 5139 kilometres by motor-car, and 551 kilometres on foot or on horseback—and he does not seem to be ashamed of it!

A. COWLEY.

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ANCIENT HIGHWAYS OF THE PARISH OF HALIFAX. By W. B. CRUMP, M.A. *Halifax: Halifax Printing Co. Ltd.*, 1929. pp. 115, 2 illustrations and 2 folding maps. 4s.

The Author deals with a part of Yorkshire which is off the beaten track, on the slope of the Pennine range and on the fringe of a wild moorland country. The book is not commonplace topography but full of interest to the student of the old trading routes of the 17th and earlier centuries, especially in the historical facts drawn from constables' accounts and other local data. By these happily disposed extracts we can visualize the motley traffic passing along the roads. Valuable too, are the little side-lights thrown upon the evolution of the settlements from early times. Mr Crump has obviously made a close study of the roads and trackways or 'causeys', and peopled them with the men of the period with the pack-horse trains, the gypsies, the traveller 'with a pass' and the 'outlandish' persons, in fact the flotsam and jetsam of the 17th century. More than a passing acquaintance is shown with the map makers from the 16th century onwards and the author has left no source of knowledge untapped. Very interesting are the payments for the upkeep of roads and Mr Crump is to be congratulated upon his work for the preservation of their historical importance. We note the book is a collected edition of a series of lectures written for the Halifax Antiquarian Society, and we hope that other societies may encourage such endeavour. It is a treatise which can be read with enjoyment by even a complete stranger to the district, so entertaining are the historical references.

HUGH P. KENDALL.

STONEHENGE, TODAY AND YESTERDAY. By FRANK STEVENS. *London: H.M. Stationery Office. Revised edition*, 1929. pp. 90, with illustrations and plan. 6d.

This is a revised edition of the official handbook familiar to Stonehenge visitors and both in exposition and in *format* is a model of its kind. The astronomical theory is stated very fairly; the Druids are swept back gently into the limbo. The main conclusions from recent investigations are well described though it is a pity it was thought necessary to omit the logical deductions on which they are based since they are such instructive examples of modern archaeological method.

Mr Stevens still keeps to the attractive guess that the blue stones formerly stood in the Aubrey holes but if the numbers of stones and holes are to correspond as he suggests he will have to revise his figure of fifteen stones in the horseshoe.

The examples of drinking cups quoted on p. 81 are apt to mislead as to the actual rarity; the fact that half of the beakers found in Wiltshire, as shown in Mrs Cunnington's list, were near Stonehenge, is important.

A new sketch plan is added showing the latest discoveries, including the z and y holes, to which however there is no reference in the text.

ERNEST WALLS.

MEISTERWERKE DER TÜRKISCHEN MUSEEN ZU KONSTANTINOPEL : Band 1. Griechische und römische Skulpturen des Antikenmuseums. By MARTIN SCHEDE. *Berlin and Leipzig: Walter de Gruyter and Co.*, 1928. 50 plates. 180 marks.

Works upon ancient sculpture appear with gratifying frequency; too often their price places them beyond the means of most individuals. This costly volume of fifty fine photographic plates—the first of a series—is a welcome contribution from Turkey,

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produced under the care of Dr Schede, of Berlin, who has written a short and popular introduction, printed in Turkish and German. The book fills a need, since the authoritative catalogue of Mendel called for illustration. The 'Alexander' and other Sidon sarcophagi, having been illustrated in the works of Hamdi Bey-Reinach and Winter, are not here included.

The plates cover a period of nearly a thousand years, during which one tradition reigned throughout the Eastern Mediterranean, though with great undulations of style and excellence. This is perhaps the chief value of a book dealing with art locally rather than chronologically; as we turn over the pages, we see the history of the land mirrored in its art. Constantinople is richest, as might be expected, in Hellenistic art; but there are interesting archaic works, such as the well-known 'Funerary Banquet' from Thasos, with its subdued and dignified pathos; a couple of chariot-reliefs from Cyzicus; and a noble late archaic horse's head, below which Dr Schede, by showing an example of the same subject made some three centuries later, has strikingly illustrated the difference between the majesty of idealism and the cloying exactitude of painstaking realism.

Among works of the Classical period may be mentioned an interesting sarcophagus from Gaza, a Hellenized version of the Phoenician highly stylized anthropomorphic type, the face alone being naturalistically rendered.

Most of the Hellenistic works will be familiar: a 'white' Marsyas; the effeminate Apollo from Tralles; the relief from the same place showing a man beneath a plane-tree making fast one end of a rope; the pretty boy boxer, wrapped, meditative and slightly smiling, in a simply but artfully disposed cloak (the acknowledged darling of most visitors to the museum); and of course Alexander, if indeed we may so say: for to become a legend and a god involves the penalty of becoming also a type. We see also, in side-view as well as frontally, the statue of a woman from Magnesia in which three layers of drapery are portrayed with marvellous technique; the Muse from Miletropolis in the manner of the Neo-Attic reliefs, for which a Pergamene origin is in consequence claimed; Caryatids, including the fine archaizing example from Tralles; and other statues belonging to the same period.

With the Roman period interest centres on portraiture: we see Claudia with a Flavian headdress (perhaps the fashion lingered longer in Asia); Hadrian, conqueror and builder, armoured and scowling, his foot upon the neck of a prostrate barbarian. We see examples of what may be called his Hellenic Revival; although we notice how the Roman spirit worked in the crudity of sculptures intended to adorn lofty buildings—what the eye did not see the heart did not grieve for; and in the profuse but heavy-handed decoration of the baths at Aphrodisias—formal foliage alive with cupids and beasts and birds. To a not much later date belongs an over-embellished sarcophagus from Tripolis, among whose decoration may be discerned—but with a difference—the same scene of domestic life as appears on the archaic stone from Thasos.

To a century later belongs the well-known and interesting sarcophagus from the site of Sidamara, typical of a group of coffins in which an architectural background is overloaded with sculptured figures; the deceased appears, but it is clear that his features were only added to a stock-line when the tenancy of the coffin had been decided upon. Half of the decoration consists of an elaborate hunting-scene: the lid follows the originally Etruscan fashion of showing recumbent figures of the dead.

This work presents many points of interest: not least, the extent to which the drill was superseding the chisel as sculpture went its way towards Byzantinism. Not only in technique, but in the faces of the portraits of this period, as we pass from the 3rd

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to the 4th century, do we see the signs of a changing world. The expression of countenance is no longer pagan : it is eloquent neither of the enjoyment of life nor of intellectual effort ; it tells of the throes of salvationism. We are faced with the forerunners of mediæval sculpture : we certainly feel ourselves already upon the threshold of Byzantine art.

Byzantium was founded by Greeks, and Greek, in spite of an over-lay of Roman domination, it remained. The history of the land is in this book, of which no appreciation save that yielded by study of its pages can be sufficient. It is a pity that so few of us can afford so expensive a luxury.

W. L. CUTTLE.

THE PREHISTORIC AND ROMAN REMAINS OF DENBIGHSHIRE. *By* REV. ELLIS DAVIES, M.A., F.S.A. *Cardiff: William Lewis Ltd., 1929. pp. xxiii, 426, with 146 illustrations and map.*

The book is a welcome and successful attempt by one of the joint editors of *Archæologia Cambrensis* to catalogue with brief descriptions the Roman and pre-Roman antiquities of the county of Denbigh, the monuments and finds being classified under parishes. Roman influence is only represented by the potteries at Holt, coin hoards, and two sets of bronze cooking utensils, one of about 50 pieces.

Five megalithic burial chambers are described as still more or less intact, including Capel Garmon recently illustrated in *ANTIQUITY* ; of others there is little more than the memory to record, while one imaginary example in Llanrhaiadr ym Mochnant is rightly rejected. Over 250 tumuli, cairns and circles are plotted on the map. Here comparison with the Inventory of the Royal Commission on Ancient Monuments is inevitable, and the corresponding distribution map in that volume shows that the gleaner has gathered more than the harvesters, who only record between 50 and 60.

It is satisfactory to find that one hill-fort of much importance in the parish of Llanfair Dyffryn Clwyd, which was very summarily dismissed by the Commissioners, now receives fairer treatment (although the plan of it is incomplete). Other omissions are made good by the plan and description of the fort on Mynydd y Gaer in Llanefydd parish, the description of a second in the same parish, and others in the parishes of Llansantffraid Glan Conway, Tre Brys, and two in Llangollen, Pen-y-gaer, and the early entrenchment on Dinas Bran within which the mediæval castle was placed.

The map is a poor thing, lacking parish boundaries and containing many misspellings of place-names, and its only use is to indicate the distribution of the different types of monuments. The failure to show clearly the boundaries of Merford and Hoseley, the detached portion of Flintshire contained in Denbighshire, wrongly accuses the author of omitting to mark the great outlying hill-fort known as the Rofft, alongside the main G.W.R. line—now, alas, being rapidly destroyed for the sake of the gravel of which the hill is composed.

The county boundary is also wrongly placed near Pentre Foelas, leaving a hill-fort in the parish of Tre Brys apparently outside the county.

For these blemishes the author is only partly responsible, while he deserves every credit for the fifteen years careful and accurate field work and research which have produced a volume which supplements the Inventory of the Royal Commission and sets an example which might well be followed by other counties in England as well as Wales.

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THE ENGLISH PARISH CHURCH. By E. A. GREENING LAMBORNE. *Oxford: at the Clarendon Press, 1929. pp.157, with illustrations. 3s. 6d.*

This is an interesting little book, and as it covers the history of the parish church from Saxon times to the eighteenth century, and also deals with effigies and armour, costume, epitaphs, chests and parish records it follows that only a selection of the important facts can have been included. Its weakest point is its illustrations. The plates are not very clear and do not always illustrate the subjects for which they were chosen; the figures themselves are good, but in the majority of cases no statement is made of the place from which they are taken. In reading the book it is a constant annoyance to be referred to plates and figures the page of which is not given.

The statement on p. 64 that 'foliage of a square and lifeless kind was sometimes cut on caps by the mason but carving had for the most part passed into the hands of the carpenter by the end of the fourteenth century' is not true, at any rate for the West country, where beautiful stone work of fifteenth century date is found on pulpits, doorways, panelling on flat surfaces and elsewhere. DINA PORTWAY DOBSON.

CLASSICAL SCULPTURE. By A. W. LAWRENCE. *London: Jonathan Cape, 1929. pp. 419, with 160 plates and 31 text illustrations. 15s.*

There is a tendency in recent times to approach the Ancient World as an unity in the earlier stages of study. What other writers have attempted in history Mr Lawrence in this book essays in the field of sculpture, and surveys the whole course of development of Greek and Roman work from earliest times to the end of the Pagan Empire. There is much to be said for such a broad sweep in an introductory study. A mere glance through the plates of this volume is enough to reveal the variety of the achievement of the Ancient World in this field, and the striking differences in aims and technique over this long period can scarcely fail to rouse interest. Moreover, books on Roman sculpture are few, and the subject has received less attention than either the existing remains or their importance in the history of art would warrant. 'Some', says Mr Lawrence, 'profess to see little Hellenic influence in the technique of Roman art, but that idea is as false as the old view that Roman art was merely Greek art in its last stages of decay. The differences between Greece and Rome have been too well emphasized, but what has not been sufficiently emphasized is that each brought to the other a complementary gift'.

The brevity imposed upon the author by the treatment of so large a subject in the small compass of 400 pages sometimes leads him to make rather sweeping statements for which evidence would be hard to find. In this manner is his remark that 'any Minoan or Mycenaean influence upon the sculpture of historic Greece, if indeed it was felt at all, was exerted merely through the accidental discovery of buried works of art'. The Minoans and Mycenaeans have indeed little to show in sculpture, but the almost contemptuous dismissal which they receive from Mr Lawrence is perhaps a little misleading. In the enumeration of the few survivals of this age mention might perhaps have been made of the British Museum fragment of relief showing part of a bull and a tree, figured in Hall's *Aegean Archaeology* (plate xxxi, 2).

The fullest treatment is naturally accorded to the fifth and fourth centuries B.C.; indeed the chapters on this period occupy nearly a third of the book. Brief introductory chapters deal with such subjects as the bases of our knowledge, the materials and methods employed by ancient sculptors, copies, deities and their attributes, and Greek and Roman

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dress. Although in many sections Mr Lawrence's treatment is summary, fuller sources of information are indicated in footnotes and a bibliography. An excellent feature of the book is the liberal scale upon which it is illustrated. Apart from some 30 figures in the text there are 160 plates, many of which contain illustrations of two works. The plates are admirably clear, and in addition to the works commonly figured we are given much that is less familiar. The fine Roman head of a girl in New York is here published for the first time, and by admitting sparingly illustrations of the Parthenon sculptures, which are readily accessible, Mr Lawrence has made room for many other things of interest, such as the reliefs from the treasuries of Delphi, the stela of a horseman (Vatican), an archaistic relief in Copenhagen, the old woman marketing (New York), and the 'Lycian' sarcophagus (Constantinople)—to name only a few of them. Mr Lawrence's book is a very useful introduction to the study of classical sculpture, either for the professed student, or for those who would acquire some basis of knowledge for the appreciation of the many works of ancient sculpture to be found in the museums of Europe.

The book is well produced with pleasing type, and errors are few. The following small points however were noticed:—p. 79, line 3 from the end, *for* Plato *read* Pluto; p. 158, line 13, *for* Alixikakos *read* Alexikakos; p. 150 (footnote) *for* Deonne *read* Deonna; p. 371, line 4, *for* enlving *read* enlivening. The bronze head figured in plate IIIB, conjectured to be that of Demetrius I of Syria as the text states (pp. 303 and 312), is described on the plate as Demetrius II.

G. F. FORSEY.

SOVANA. By R. BIANCHI BANDINELLI. *Florence: Rinascimento del Libro*, 1929. 100 lire.

Sovana has been selected as the subject of the first monograph upon an Etruscan site to be published by the Comitato Permanente per l'Etruria, which, under the presidency of Antonio Minto, the energetic head of the Archaeological Museum in Florence, is doing such good work in the study of the various problems connected with Etruria. The choice is perhaps justified; though there is little to be said of the city, of which nothing remains* but a few fragments of the walls which are to be seen in the medieval fortifications, the extensive necropolis possesses one very important tomb of a type which has so far not been recognized elsewhere in Etruria. The necropolis was, as a fact, first brought to the notice of scholars by S. J. Ainsley, the friend of George Dennis, who published an account of the more interesting tombs in 1843: though the tomb in question was only noticed a few years ago by Von Mercklin, and was first described in print by Rosi,† who named it Tomba Ildebranda, after the great pope who was a native of the little medieval town. The full description of it which is given in the present work is the result of excavations which have been carried on by Bianchi Bandinelli, and it is the only example so far known of a real and complete reproduction of a temple in an Etruscan rock-cut tomb. The tomb known as the Grotta Pola is similar, but has no more than the front façade and podium; while in the two 'temple tombs' at Norchia the latter element is lacking, and there is no more than a pediment supported by columns. The Grotta Lattanzi at Norchia has two superposed orders of columns, and is not,

* Some scanty remains of a temple were found outside the walls in 1895, but we have no proper description of the excavations. A number of fragmentary terracottas, specimens of which are in the museum at Florence, were found.

† *Jour. Roman Studies*, 1915, xv, p. 49.

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therefore, the reproduction of a temple at all, but is rather an imitation of the double portico of a market or some other public building.

There are also several examples of cube tombs at Sovana, which, Bianchi Bandinelli maintains, are not to be treated as exact imitations of domestic architecture, but rather as summarized reproductions of it, in which the exact proportion of the various parts is not observed. The most important element is recognized (and rightly, I think) as being the sepulchral *cippus* which stood on the top, which at Sovana is generally hewn out of the rock like the rest of the tomb.

Another point in which I am glad to be able to agree with him is in his rejection of the parallelism which it has been sought to establish between the rock-hewn tombs of Etruria and similar tombs in Caria and Lycia with the object of acquiring arguments in favour of the Herodotean tradition of Etruscan origins. We would rather see in them the common stock of Hellenistic form from which the whole Mediterranean basin drew.

T. ASHBY.

DIE VERBINDUNGEN ZWISCHEN SKANDINAVIEN UND DEM OSTBALT-
TIKUM IN DER JUNGEREN EISENZEIT. By BIRGER NERMAN. (Kungl.
Vitterhets Historie och Antikvitets Akademiens Handlingar). Stockholm:
Akademiens Forlag, 1929. pp. 185, with 195 text-illustrations. 5 kronor.

The author examines the archaeological evidence in support of literary tradition of relations between Sweden and the region comprising Lithuania and Esthonia. He divides his thesis into two periods. Before the first of these, A.D. 400–800, archaeological evidence of communication between the two regions is sparse, but he is able to show that about A.D. 500 an influx of Swedish objects into the Baltic lands can be brought into line with an evident decrease in the population of the island of Gotland during the early part of that period. The relations thus established continued, though in diminished degree, throughout the period.

In the Viking Age, from A.D. 800 onwards, the literary sources are at first almost silent, but from 850 to 900 there are frequent accounts of expeditions of a warlike nature from Sweden. After a break of a hundred years they again become numerous enough to indicate a Swedish domination, though of rather short duration.

On the archaeological side these relations are marked throughout by a pre-dominance of arms, swords, spears and the minor trappings of warriors as compared with female gear. From this phenomenon, the isolated nature of the finds and the absence of Swedish graveyards of Swedish type, such as occur in Russia proper, it is inferred that the Swedish campaigns were not followed by colonization in spite of the fact that most of the objects come from the western part of the Baltic lands. The numerous parallels that can be drawn between these and the antiquities of Gotland, the latter often peculiar to that island, suggest that it is rather a question of trade from that important *entrepot*. To judge from the protests made by popes of the 13th century, even the arms may have passed by way of commerce rather than in the course of the numerous Baltic campaigns of the period. In conclusion the corresponding East Baltic antiquities discovered in Sweden are summarily discussed.

Perusal leaves the impression that the material is somewhat slight to bear the full weight of Dr Nerman's deductions, but a survey of presumed imports from one region to another, especially when so amply illustrated and documented, will always receive a ready welcome from students of archaeology.

E. T. LEEDS.

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ACTA ARCHAEOLOGICA. Vol. 1, fasc. 1. Copenhagen, 1930. 21s. per annum (3 fasc.).

THE MUSEUM OF FAR EASTERN ANTIQUITIES, STOCKHOLM.
Bulletin no. 1, 1929. 20s.

ARCHIV ORIENTÁLNÍ: Journal of the Czechoslovak Oriental Institute. Vol. 1,
no. 1. Prague, 1929. 12s. (3 nos.).

New periodicals, if they are good ones, may justifiably alarm us in as much as they are here manifestly to strengthen the already vigorous onrush of important learned literature that now threatens to overwhelm by its sheer oppressive bulk even the most industrious and stout-hearted students. The claims of newcomers upon our attention accordingly invite an examination that is almost openly suspicious and it is as well to say at once that the first numbers of the three journals named above are all of unimpeachable excellence and will easily convince both librarian and reader that a place has to be found for them on our crowded shelves. They even deserve, I venture to think, a conspicuously warm welcome for the reason that, though they come to us from Copenhagen, Stockholm and Prague, their editors, knowing that the northern and central European tongues can only be a medium for local and esoteric record, have deliberately made a bid for international popularity by their wise decision to use only the better-known languages of French, German (in Roman type), and English.

Dr Bronsted and his distinguished colleagues, who together represent the countries of Denmark, Norway, Sweden, and Finland, purpose to provide in their handsome *Acta Archaeologica* a summary of the manifold archaeological activities of northern scholars in whatever province they may work; to this end they offer us some longish papers of solid worth and afterwards in a section of miscellanea find room for shorter notes and (in the future) select book-reviews of authority and real import. The catholic interests of the new journal is indicated by the choice of articles for the first number:—Dr Shetelig of Bergen describes in detail the Nydam boat at Kiel and is able to compare this famous 4th century vessel with his own Kvalsund boats and the later viking boats of Norway; then Dr Poulsen of the Copenhagen Glyptothek publishes three classical portrait-busts of more than ordinary importance and in so doing sets a standard of illustration (see especially plate iv) that it will be hard indeed to maintain; next Dr Friis Johansen of the National Museum at Copenhagen catalogues and discusses some seal-impressions that are evidence of Seleucid Hellenism in Uruk-Warka, and, finally, Herr Otto Rydbeck of Lund gives an English summary of his views upon the sequence of prehistoric civilizations in the north. The shorter notices, like the longer articles, are well illustrated and range in interest from Babylonian buildings to Norse carvings in bone and ivory; in this section the account of the Swedish town Sigtuna deserves special mention since it is patently a document of first-rate importance to the student of the early Middle Ages in northern Europe.

It may be that the wide scope of *Acta Archaeologica* will suggest some misgivings, most of us finding that an indiscriminate medley of eastern and western material differing in age and kind is a good place in which to lose even the most useful contribution of the individual specialists; but there is certainly no reason to fear that too great a range of interests will detract from the value of another new northern venture, the fine Bulletin of the Stockholm Museum of Far Eastern Antiquities, even though at first opening Fru Hanna Rydh surprises us with pictures of a Scottish beaker and the Folkton drums. But this is part only of a comprehensive paper on 'Symbolism in Mortuary Ceramics'

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that is a legitimate sequel to Professor Andersson's study of the symbolism of the pre-historic painted wares of China, and, Fru Rydh's excursus apart, this excellent publication is devoted to the problems of the Far East and the way thither over the steppes. The format and the illustrations of the bulletin are alike excellent. Chief among its contents is a notable paper on Chou Dynasty pottery, and in addition to the archaeological essays there are also valuable contributions to Chinese studies of historical, linguistic, and literary interest.

The new Czechoslovak Oriental Institute of Prague has likewise issued the first number of a journal, *Archiv Orientalní*, that is devoted to eastern studies. It is a smaller and more modest publication than the Swedish bulletin and its first number is unillustrated. The editors intend it to be a vehicle for an exchange of ideas among oriental scholars of all nations and the contents show that it is addressed only to specialists. There are articles on the Rwala Bedouins, Singhalese devil-worship, and Hittite and Egyptian texts, and there is also an important paper by A. Wesselski demonstrating how eastern history may in some instances be reflected in western legend. The uncompromising and scholarly severity of the *Archiv* is a virtue that its small public will esteem; all honour then to President Masaryk who has made its publication possible by his great-hearted endowment of the institute this journal represents. T. D. KENDRICK.

EXCAVATIONS AT NUZI. Vol. I. Texts of varied content, selected and copied. Edited by EDWARD CHIERA. *Harvard Semitic series. Harvard University Press; Oxford University Press, 1929. pp. 106. 27s 6d.**

Dr Chiera's book can of necessity be read only by specialists, since it consists of cuneiform texts without any transcription, translation, or commentary. Its contents, however, will interest those concerned with the ancient history of the East. The texts were found at Kirkuk, a town lying to the east of Assyria, and their provenance is well established. They consist of archives of a domestic, royal or priestly nature; out of the thousands of documents which the excavations yielded Dr Chiera now publishes 107, dealing with the affairs of two important families of the period round about 1400 B.C. Their interest lies in what they tell us about the customs of this society, whose very peculiar laws seem to have forbidden the splitting up of family property. To get round this prohibition it was usual to employ the term 'adoption' in agreements where the so-called adopted person received a portion of property and in exchange gave a present to his new relations. The tablets do more than this; they introduce us to an Assyrian-speaking people, many of whose proper names belong to a different language, which we know to be that spoken in the kingdom of the Mitanni, in Upper Mesopotamia, about 1400 B.C. An ethnic element of non-Semitic origin is to be found; it is called Subarean and includes the Hurri. During the second millennium a portion of the Hurri became the independent state of the Mitanni; they were ruled by a probably Indo-European aristocracy and their power increased considerably, extending from the Zagros range in the East to the Mediterranean in the West. This came about all the more easily because the Subarean people covered the whole region. This is shown by the fact that everywhere within it the same artistic style prevails, and the same proper names occur, indicating a large Subarean element in proportion to the total amount of the population. The language of the Subareans appears to have been very different from that of the Semites;

* Review translated by the EDITOR.

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on the other hand it is closely akin to that of the people called proto-Hittites who in the third millennium inhabited eastern Anatolia. Their proper names are known from the Cappadocian tablets (end of the third millennium), and from some fragments preserved in the archives of Boghaz Keui. This group of populations, which appears to represent the oldest stratum of the nearer East, has been called Asianic. The interest of the discovery, as will be seen, far surpasses that of the book itself; it consists in bringing to light a new factor of civilization and one which played a leading part in the history of Western Asia. For fuller knowledge of it we are indebted to Dr Chiera.

G. CONTENAU.

HISTORY AND MONUMENTS OF UR. By C. J. GADD. *Chatto and Windus*, 1929. pp. xvi, 270, and 33 plates. 15s.*

Recent excavations at Ur have revealed monuments and texts in such numbers that a monograph is possible; and such was the importance of Ur that to write its history is almost equivalent to writing that of Sumer itself. This has just been done by Mr Gadd, of the Department of Egyptian and Assyrian Antiquities in the British Museum. The discovery of what have been called the Royal Tombs of Ur, and of the relics of a Flood, enable us to follow its history right back to a period hitherto known only from Sumerian texts and called by them 'before the Flood'. It is a phase of civilization marked by the use of stone and of that painted pottery which occurs throughout Sumer. Then, after the flood whose deposits form a dividing stratum, the civilization changes its character; painted pottery disappears, writing becomes fully developed, metal becomes common (though it is still copper and not yet bronze); then appears in art the style called Sumerian and history begins with the first Dynasty of Ur. To this period, about 3100 B.C., belong the bulk of the Royal Tombs and the Temple of Tell el Obeid, a mound near Ur where Mr Gadd excavated. This first dynasty passed away and its supremacy passed to the city of Lagash, whose remains have been known since the French excavations at Tello. This archaic period ended with the dynasty of Agade, which represents the overthrow of Sumerian civilization by Semites of western origin.

The Guti, barbarians from the highlands of Zagros, overwhelmed Mesopotamia, and after an ascendancy of 120 years, the third Dynasty of Ur restored Sumerian civilization. The ruins of Ur have yielded a number of monuments of this period, from the Ziggurat—one of the best preserved in all Sumer—to the fragments of the stele of Ur Nammu, the founder of the Dynasty. On it he is shown standing before his god, offering a libation or a bloody sacrifice, or perhaps in the rôle of founder of the temple.

Next ensued a civil war, and the first Babylonian dynasty whose most distinguished ruler, Hammurabi, secured for the kingdom a degree of prosperity which was welcome after the previous troubles.

The next period is that of the Kassites, invaders from the East, less barbarous than the Guti; they ruled the country for 570 years. Under this dynasty, notably under King Kurigalzu, some of the great temples of Ur were restored. The city seems to have been relegated to a back place during the Assyrian Empire, when it was controlled by a governor. One of them, nevertheless, Sin-balatsu-iqbi, had important work done there on the Ziggurat and temple-structures. Under the neo-Babylonian Empire, the good king Nabonidus showed his religious zeal by renovating the monuments of the city,

* Review translated by the EDITOR.

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till he became unpopular by foolishly robbing the provincial towns of their principal gods and concentrating them in his own capital. The Persian conquest was welcomed throughout the whole Empire, and one of the first acts of Cyrus was to send Ur the statue of Sin, the Moon-god, which had been removed from the town. Ur now came to the end of its existence ; the last dated document from it belongs to 440 B.C. Perhaps it was still inhabited up to the third century : after that came oblivion.

Mr Gadd describes the course of events, treating of the problems to which they give rise, notably that of the migration of the clan of Abraham from Ur of the Chaldees, which may be assigned to the period of Hammurabi. One cannot recommend his book too highly, for it tells its story in a form which is both readable and authoritative.

G. CONTENAU.

THE SANCTUARY OF ARTEMIS ORTHIA AT SPARTA : excavated and described by members of the British School at Athens, 1906-1910 : *edited by R. M. DAWKINS. Published by the Society for the Promotion of Hellenic Studies. Macmillan, 1929. pp. 420 with frontispiece, 148 illustrations in the text, 208 plates. £5 5s.*

This volume, by which the Hellenic Society marks the fiftieth year of its devotion to classical archaeology, incorporates material previously scattered in several volumes of the Annual of the British School at Athens. Of the team who contribute to it, all, except Professor H. J. Rose, were members of its editor's staff upon the site ; since then, War claimed Guy Dickens, to whose valuable writings a posthumously published paper is here added.

This excavation, the School's most important contribution to research into classical antiquity, was distinguished by great accuracy of method ; it gave cause for a revision of the common estimate of the Spartan character ; and has provided abundant material for explanation and application. This book puts forward the evidence ; the preface frankly disavows any intention of dealing deeply with either its implications or its connexions : we must be content with the facts, here presented definitively within one cover.

The sanctuary arose in the riverside district of Limnai in the ninth, or even the tenth, century B.C., later only in Dorian Sparta to the Amyklaion and the Acropolis site, to judge from the technique of the Geometric pottery. Soon, still in the Geometric period, a wall, a cobble-pavement and an altar were made, remains of which were scanty ; while of the temple which presumably accompanied them no trace was found. The earliest temple-remains are associated with the ' Archaic Altar ' of the next period, dated from the ninth to the seventh century, during which ' Laconian ' pottery is developed from Geometric and passes through the first two of the six stages into which Professor Droop has divided its history. The temple must have been a very simple example of the infant Doric style ; Professor Dawkins' inferences from its foundations suggest a line of enquiry into Dorian origins.

The archaic altar has been well preserved beneath a layer of sand by which, probably to prevent inundation, the level of the sanctuary was raised about 600 B.C., and which acted as a stratigraphical line of division. Upon it appeared a new temple, whose foundations served for subsequent rebuildings, including that of the Roman period. By conjecture from a few fragments and from analogy it may be plausibly reconstructed as *prostyle in antis*, with a painted *pores* pediment decorated with a pair of heraldically facing lions. The only remnants of a Greek altar associated with it are, with some diffidence, referred to the 5th rather than the 6th century (to which the temple belonged)

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on account of the objects found in their vicinity. In any case the superimposed Roman altar has almost obliterated its Greek predecessor.

The period immediately succeeding the laying down of the sand saw the acme of the Laconian pottery style, in Lac. III and IV: the vases previously known as 'Cyrenaic' are shown by Professor Droop to have been, beyond all doubt, exports of this period from Sparta. Greater care was now apparently exercised in the removal of sacrificial *débris* from the temple and altars: it was thrown clear of them over the edge of the sand fill; the resultant sloping strata were excavated with reference to the nature of the earth and similar considerations, instead of by levels only. The details of this process which were published in vol. XIV of the *Annual* help to establish confidence in the chronological assumptions made: but it does not appear, either from Professor Droop's definition of Lac. IV (which differs from Lac. III in its incipient degeneracy of style and technique), or from Mr Wace's remark that the only dichotomy possible in the lead figurines of Lac. III-IV would be the grouping of types carried over from Lac. II as Lac. III, and of those which persist into Lac. V as Lac. IV, that close-cut distinctions can here be drawn. It is, in fact, unfortunate that just at a time when Laconian art had reached a static point, precluding its decline through successive stages of degenerative repetition, its remains should have occurred in a context which, with the utmost skill in excavating, must still present great difficulty and uncertainty.

To consider the dating of these strata: Lac. I's appearance is put at c. 700 B.C. on account of the occurrence of Sicyonian ('Proto-Corinthian') pottery with Geometric alone (45%), with Geometric and Lac. I mixed (45%), and with Lac. I alone (8%); calculation based on depth of deposit gives c. 900, or even earlier, for the earliest Geometric pottery on the site. The layer of sand dividing Lac. II from Lac. III is dated c. 600 by (i) the epigraphical evidence of two inscribed Lac. II plates belonging to the latest pre-sand period, (ii) the external evidence for dating Lac. III to c. 600-550 provided by the Arkesilas cup in the Bibliothèque Nationale and by Laconian pottery found by Petrie at Daphnai, (iii) the presence of marble mason's chips throughout the sand, indicating that the latter was laid down gradually as the new temple's foundations rose and that there was no great gap between the pre- and post-sand periods. Remains of the Lac. II style were very few: Professor Droop reinforces his description with material from the Menelaion (and the excavations of 1924-27 on the Acropolis have added more, with which he has dealt in the *Annual*, vol. XXVIII); it therefore would seem, either that the flooding which induced the Spartans to raise the level of the sanctuary denuded the site of its upper strata, or that it caused a hiatus in offerings which it is hard to reconcile with the advanced character of the latest remains from below the sand.

The development of the pottery is paralleled by that of the other finds, in particular of the lead figurines, characteristic of Sparta, which occurred in immense quantities, especially in the Lac. III-IV context. At first they often imitate jewellery, but this is largely superseded by other types after Lac. II, *i.e.* after the Second Messenian War; the embargo on jewels naturally rendered the dedication of ritual counterfeits meaningless if not distasteful. The art of ivory-carving, represented here charmingly and more fully than, probably, anywhere else in Greece, is proved by the existence of unfinished examples to have been local: it has been much discussed, notably by Hogarth and Poulsen. Professor Dawkins concludes that of the elements which combined to influence it the Phoenician was the strongest and the Ionian the weakest; but that the native Spartan element is also a dominant feature. Guy Dickins' paper describes, classifies and

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discusses the terracotta votive masks, mainly found above the sand: these should provide interesting material for the study of racial types. On the bronzes, summarily treated by Professor Droop, further notes by Miss Lamb will be found in the *Annual*, vol. xxviii. It is interesting to notice among them a miniature jug with 'cut-away' neck, typical of Macedonia. Mr Wace deals with the few sculptural fragments, and Professor Dawkins with the jewellery, etc.: Mycenaean gems survived in use, and exercised an artistic influence.

To resume the history of the site: the excavators noted a great decrease in the numbers of small finds of the Lac. v and vi periods; they occurred in patches at a uniform level which suggested that the site was artificially levelled about 500 B.C. But the most plentiful Lac. v-vi remains came from houses (probably occupied by sanctuary officials), where Lac. vi was seen to yield to Hellenistic ware and Megarian bowls, thus establishing the date c. 250 B.C. for the final years of its manufacture. A great covered drain was made in the later 3rd century, and, probably at the time of the Lycurgan revival, the temple was reconstructed and re-roofed.

During the period from the 4th century to the Roman rehandling of the site a series of dedicatory inscriptions, mostly of the later 1st and 2nd century A.D., accumulated. These Mr Woodward describes with much prosopographic detail. The most interesting are those commemorating *Bomonikai*, boys successful in the endurance-test, who dedicated their prizes (sickles), and sometimes statues of themselves. There is no evidence (as Professor Rose in his very useful and learned paper on the cult of Orthia shows) for the existence of a cruel and vicious rite before late Hellenistic and Roman days. In Roman times—after A.D. 225—an amphitheatre was built, in which the front of the temple took the place of the usual proscenium and stage-buildings; and it may well be that the performance of this unkind ritual was witnessed from its benches. This theatre, a conspicuous ruin a century ago, became a quarry for modern Sparta. But pier-bases and radial supporting-walls have been excavated. The end of the story is shadowy: the cult lasted to the 4th century A.D. at any rate; Christianity came late to Laconia.

This review necessarily cannot do justice either to the material revealed by this excavation, or to the labours of those who have described it. Attention has been rivetted upon the pottery, because of its chronological significance: but the other finds are of great interest and importance. In addition to those already touched on, Professor Dawkins devotes space to the numerous terracotta figurines and to the carvings in soft limestone; and Mr Woodward adds to his lengthy article upon the inscriptions a joint paper with Mr George upon the architectural terracottas, and has also an inventory of coins from the site, with notes on the iron currency. To Miss Tankard many will be grateful for the graphic chart of the six Laconian pottery styles.

Professor Rose declares that the cult of Orthia was purely Dorian, even if later identified in some aspects with that of the 'Persian Artemis', who, as Our Lady of Wild Things, was worshipped in pre-Hellenic Greece. Mr Wace, who quotes Professor Nilsson in support of his view, is inclined to suppose that Orthia may have descended from the Bronze Age, or that at least her cult was closely connected with cults of that period. He instances certain survivals of type and ornament displayed by the lead figurines, especially those of earlier date. There are, indeed, a number of factors which make one wonder what elements, artistic and otherwise, of early Dorian Sparta are to be referred to the pre-Dorian inhabitants, with whom, before the introduction of the one-sided arrangements known to history, the Dorian must have arrived at some kind of *modus vivendi*.

W. L. CUTTLE.

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OUR FOREFATHERS, THE GOTHONIC NATIONS: a manual of the Ethnography of the Gothic, German, Dutch, Anglo-Saxon, Frisian and Scandinavian Peoples. By GUDMUND SCHÜTTE. Vol. I, translated by JEAN YOUNG, M.A. (Cantab.). Cambridge, at the University Press, 1929. pp. XI, 301. 21s.

This manual of the ethnography of our forefathers, the first volume of which appeared in Danish in 1926, is planned on a large scale. The part published may be said to form an introduction to the great work and deals with the earliest phase, the names, subdivision, ethnic position, environment (neighbours), old home, language, civilization, and history of Gothonic (Germanic) peoples on more general lines. The various nations, Anglo-Saxons, Scandinavians, etc., will be fully dealt with in the next volume (or volumes). Obviously a definite judgment of the book must be reserved till it can be studied in its complete form.

The ethnography of Germanic nations is not really a one-man job, even if the author is a scholar who has, like Dr Schütte, devoted half a lifetime to the subject. It is impossible for one scholar to master equally well all the different departments of the field. Specialists will find numerous details that are open to criticism, and for this the author himself is prepared. I could myself contribute a fairly long list, if space permitted it. I content myself with a few examples. We are told (p. 46) that 'breaking' before a single consonant does not normally take place after w, l, r, in Scandinavian and Old English. This is certainly not true of Old English; cf. *cleofian*, *andleofen*, *leofian reopian*, etc. The British word *Dornovarii*, which plays a fairly important rôle for the author's theory on the origin of the suffix *-varii*, is unrecorded. All we know is that the old name of Dorchester was *Durnovaria*. The statement (p. 188) that in Scandinavia long by-names such as *Haraldr Hárfagri* were restricted to princely people, those of lower rank normally continuing to have short surnames, is at least exaggerated, as a cursory glance at the lists of Norse surnames in Lind's collection will show.

At the same time it must be admitted that there is an advantage in the manual being throughout the work of one man. As it is, the book bears the stamp of one individuality. The same fundamental standpoint is adhered to in the various parts. The whole framework is built up with strict consistency. The author himself is of opinion that the strength of the book lies in its method, the systematic framework, rather than in the subject-matter. There can hardly be any doubt that the book will have an influence on future research in the field of Gothonic ethnology, and the wider publicity gained by its publication in English is to be welcomed.

But also in the subject-matter the book offers much that is new and original; the author's outlook is independent and he has the courage of his convictions. Personally I am not convinced that the theories advanced will all hold water or that the arguments used are always valid, but they are generally interesting and at least worthy of consideration. Very suggestive is the chapter on language (pp. 147-197), which deals with the formation of names and other words from new points of view. The chapter on the old home of Gothonic nations seems to me to be one of the most convincing. On the strength of the old traditions of various Gothonic peoples and the distribution of name-types Dr Schütte makes Scandinavia the old home, but he is inclined to believe that a still earlier home, common to Gothonic, Italic and Celtic peoples, is to be sought somewhere on the North Sea coast. He assumes considerable Celtic influence not only on the civilization, but also on the language of Gothonic peoples. The origin of the name *Germani* is fully discussed. The author accepts the view that the name was transferred

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to Gothonic peoples from a Celtic-speaking tribe in Belgium. But it does not follow, he says, that these Germani were originally Celts. In the Danish edition he suggests that they were celticised Ligurians and adduces linguistic evidence in favour of his theory. In the English edition the section is much curtailed and the theory is not clearly formulated, though one seems to read it between the lines.

The translation must have been for various reasons a difficult task. Dr Schütte's style, often abrupt and strongly compressed, is not always quite easy to follow in the original Danish. On the whole the translatrix is to be congratulated on her achievement. But I have noticed a number of inaccuracies due to misunderstanding of the text. Sometimes the translatrix makes the author express himself rather more apodictically than he does in his Danish text, as when she uses the strong 'undoubtedly' where the Danish has the milder 'uden Tvil', 'sagtens', 'sikkert', or omits a qualifying adverb of this nature. Some of the slips are of a venial nature, but some are of a serious kind. Only few instances can be given here. In one case (p. 24) Miss Young has misunderstood an absolute comparative 'if he were better informed' for 'if he was fairly accurately informed'. The nonsensical statement that the Scythians should be counted as 'Iranians, Turko-Tartar invaders' (p. 68) should be corrected to 'Iranicised Turko-Tartar invaders'. The passage on Gothonic *siponeis* (p. 76) is not very clear in the original, but unintelligible in the translation. A correct rendering would be: 'the cult of Xamolxis with its philosophical schooling flourished among the Getae and Dacians. Here we have the most obvious source of the Goths' class of disciples'. 'Livonian Vidu-maa would be Livonia to-day' should be 'Liv. Vidu-maa to-day means Livonia' (p. 79). 'Chance assonance' (p. 82) should be 'chance similarity'. In the passage on Gothonic coiffure (p. 200) the translatrix has overlooked the fact that Dan. *pisk* means both 'whip' and 'pigtail'. The translation of the word twice as 'whip' makes havoc of the sense. The Norwegian farmers of Sætesdal are stated to have used a 'wry-hafted whip' instead of a pigtail worn askew in some way. On the following page the loin-cloth of the fighting Eruli becomes a 'linen shirt'.

EILERT EKWALL.

ETRUSKISCHE FRÜHGESCHICHTE. By FRITZ SCHACHERMEYR. *Berlin and Leipzig: W. de Gruyter, 1929. pp. xvii, 316*

The writer of this volume is already well-known as the author of an interesting and suggestive book on Etruscan art and origins. The present work is much more mature and has evidently taken much longer to prepare. It is undoubtedly the most important memoir on the Etruscans that has appeared for two or three years. Since 1928, when the international conference was held at Florence, there has been a great development of interest in this subject and various new writers have entered the field. Schachermeyr stands in the forefront of these recent recruits by virtue of his very wide training and his unusual independence.

A convinced adherent of the oriental theory which is now held by all but a very few, Schachermeyr wastes no unnecessary time in debating with those who maintain the autochthonous Italian origin of the Etruscans. His essay is intended less to dispel any lingering doubts on this point than to explain the time and manner of the Etruscan immigration and to fix more exactly the place of their original home. Primarily more of a historian than an archaeologist in the strict sense, he yet shows a considerable knowledge of the archaeological material and much critical ability in dealing with it.

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His strongest qualification for his task, however, is a wide knowledge of Asia Minor, reinforced by actual travel in the country, and a close association with Lehmann-Haupt, the explorer of Armenia.

The first part of the book, pp. 1-83, gives as much of the general historical background as is necessary to envisage the problems. 'Das vorderasiatische Gleichgewicht', 'Der kretisch-mykenische Kulturkreis', 'Die ägäische Wanderung', 'Die östlichen Mittelmeerländer nach der ägäischen Wanderung', are titles which sufficiently indicate the general range of the first four chapters. The fifth, entitled simply 'Italien', sketches very briefly the progress of Italy from the beginning of the Terremare down to 1200 B.C.

In his account of the 'Aegean Wandering' the author relies to a considerable extent upon parallels with the great movements of Celts, Germans, Slavs and Normans in later periods. He pictures this 'wandering' as a general movement from north to south by land and sea, bringing hordes of barbarians whose inroad broke up the whole existing balance in the Eastern Mediterranean. The principal evidence for it is to be found in Egyptian historical inscriptions, supported by a certain number of references in Assyrian documents and in the Old Testament. Corroboration of these is given by a series of archaeological facts which cannot be merely a string of coincidences. Almost simultaneously the civilization of Crete was overthrown, the Mycenaean culture was obliterated on the mainland of Greece, the upper layers of Hissarlik betray the presence of barbarian newcomers, Carchemish is destroyed and many flourishing cities of Asia Minor disappear for ever from the map. After this series of catastrophes, which the Egyptian records enable us to date very closely to 1200 B.C., there came a short period of ephemeral barbarian states of which the Philistine may stand as an example. The breaking down of these in turn was followed by a time of general reconstruction; to be dated from the 10th to the 8th centuries.

It is precisely during this period of reconstruction that our author places the emergence of the Etruscans from their previous obscurity. Dwelling on some part of the coast of Asia Minor, the exact location of which is determined in the last chapter of the book, they had as their principal neighbours, besides the Aeolian and Ionian Greeks, the Assyrians, Phrygians and Armenians—all at the height of their power. The importance of the Armenian state has only recently been brought out by Lehmann-Haupt, and pending the full publication of his second volume on Armenia, can only be estimated from the articles written by Schachermeyr himself for Ebert's *Real-Lexikon*. It centred round Tuschpa on the Lake of Van and is associated with a people known as the Chalder—by no means to be confused with the Chaldaeans. All these natives of Asia Minor were remarkably advanced in all sorts of mining and metallurgy. The excellence of the Etruscans as coppersmiths, goldsmiths, and workers in iron is explained by their long and close association with these very gifted metal-workers in a land that is rich in every ore.

The second part of the book is mainly concerned with archaeology as conceived on a few very broad lines. Though historical documents, Hittite, Egyptian or Assyrian may throw much light on the general circumstances of the time it is only archaeology, as our author sees, which can decide the essential point of the Etruscan problem. Schachermeyr's application of it is an examination of all the forms of grave-architecture. He examines this, so far as the material allows, both in Asia Minor and Etruria during the three centuries 1000 B.C. to 700 B.C. The result of this scrutiny, he maintains, is to

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show that there is complete identity of usage at the same periods in each country. Since this grave-architecture is wholly unlike anything ever employed by the native Italians, it must be derived from abroad. And as burial-customs are not transferred to strangers like articles of commerce, the Asiatic forms of burial employed in Italy prove the actual presence of Asiatic immigrants.

The seriation of the grave-forms leads our author to yet another conclusion, which, if it could be safely established, would be of great importance. He believes this seriation to prove that there were two main waves of Etruscan immigration, the one about 1000 B.C., the other about 800 B.C. Most recent writers have been contented with only one wave, the later of the two suggested by Schachermeyr. But there is no *a priori* objection to two, and the theory has the great advantage that it harmonizes with the known and perfectly definite Etruscan count of years. It also removes the contradiction with the dates of Herodotus, which is less important but has always been reckoned something of an objection to the view that the Etruscans only arrived about 800 B.C. The reason that the theory of an earlier wave has never been acceptable to writers like Ducati and myself is that there appeared to be no archaeological evidence whatsoever in support of it. Now, however, Schachermeyr comes forward with the contention that certain tholos graves, and also trench graves, at Populonia go back to his 'period of the disc-fibula', which he defines as from 1100-820 B.C. The serious leap is when he elects for the beginning instead of the end of this period. His reasons for this are of a vague generalizing character and the argument needs much reinforcement before it can be considered as convincing. Further development, however, of the study of Corneto-Tarquini and Populonia may conceivably provide more material for this thesis, the proof of which, if it could be obtained, would be exceedingly important.

Schachermeyr's treatment of the 'second wave' differs only in minor details, which are beyond the scope of this review, from the treatment of most other writers. I welcome, however, his demonstration that the circle graves of Vetulonia were originally tumuli. This view had been already suggested by some Italian archaeologists but had never before been clearly argued in print. If, as I think, we may unhesitatingly accept it, this argument proves the existence of genuine tumuli at least a century earlier than they are known on most Etruscan sites, and may be quite valuable in estimating the possible antiquity of the first tumuli at Cervetri and elsewhere.

Space forbids me to deal with chapters discussing the language of the Etruscans or the interminable contradictions in the classical statements as to the Pelasgi. The kernel of the book, at least for the archaeologist, is the long and detailed examination of the grave-forms. Schachermeyr has made out a strong case, but it needs to be very critically examined from both sides, viz. : by those who have special knowledge of Asia Minor and by those who have intimate acquaintance with the Italian sites. It would not be fair to blame the author for using a certain amount of material which is clearly defective, or for sometimes supplying by an ingenious conjecture that which is no longer visible in concrete form. Every constructive writer is obliged to do this in a greater or less degree. Ultimately, however, the soundness of the edifice will depend on whether this defective material can stand the strain, or can presently be reinforced. As to this I venture no judgement. I do not hesitate, however, to say that *Etruskische Frühgeschichte* is a very interesting book, characterized by an ingenious use of wide and varied learning. Even apart from the demonstration of its principal thesis it contains many suggestions and criticisms which deserve careful study and attention.

D. RANDALL-MACIVER.

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